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THE NUTRITIVE VALUE OF DIFFERENT FOODS.

It is a matter of great importance to determine the relative nutritive value of substances used as food for farm stock. Unfortunately, our knowledge on this subject is exceedingly limited. It was at one time supposed that the quantity of nitrogen in different food represented their relative value. Recent experiments show that, if this rule holds true in a majority of cases, there are a great many exceptions to it. Still it is interesting to know the quantity of nitrogen in different foods, for although this does not represent their nutritive value, it *does* show their relative value as manure—whether used directly as such, or first fed to animals, and their droppings carefully preserved and used afterward. The following table will be found useful for this purpose, at least, and is interesting, as embodying the opinions of men eminent in agricultural science:

TABLE OF NUTRITION—EQUIVALENTS.

Articles of food.	Theoretical values. Boussingault. Water in 100 parts.	Nitrogen in 100 parts of dry substance.	Nitrogen in 100 parts of undried substance.	Nutritive equivalent.	Fresenius. Relative proportion of nitrogen and to non-nitrogenized substances.	Nutritive equivalent.	Practical values, as estimated by direct feeding experiments, according to— Block.	Petri.	Meyer.	Thaer.	Pabst.	Schwerz.	Middleton.	Boussingault.	Schweitzer.
Meadow hay	11.0	1.84	1.65	140	..	100	100	100	100	100	100	100	100	100	100
Lucerne	16.6	1.66	1.38	88	..	..	..	90	..	80	100	100	..	..	..
Red clover hay	14.1	1.70	1.54	75	1: 6.08	77.9	100	90	..	90	100	100	..	..	..
Red clover (green)	76.0	..	0.54	311	..	..	430	..	..	450	425	..	..	..	..
Rye-straw	18.7	0.39	0.24	479	1: 24.40	527 7–12	2 0	500	150	666	850	..	..	..	267
Oat-straw	21.0	0.36	0.30	383	1: 12.50	445 5–12	200	2 0	150	10	20	400	..	..	200
Barley-straw	11 0	0.30	0.25	460	1: 29.30	471⅔	198	180	150	150	200	400	..	..	200
Wheat-straw	26.0	0.36	0.27	426	1: 14.20	433 5–12	200	86	150	45	300	..	..	..	283
Pea-straw	8.5	1.45	1.19	64	..	..	165	200	150	180	150	..	..	..	..
Buckwheat-straw	11.6	0.64	0.48	240	..	..	..	200	..	..	..	..	..	..	..
Lentil-straw	9.2	1.18	1.08	114	..	..	160	200	..	18	150	..	..	..	..
Vetches, mown in flower and dried	11.0	1.16	1.04	101	..	..	..	125	..	..	10	..	..	..	..
Potato stalks	76.0	2.30	.55	29	..	..	..	30	..	..	..	..	..	..	..
Mangold leaves	88.9	4.50	0.50	280	..	..	600	..	..	..	600	..	..	..	616
Carrot leaves	70.9	2.94	0.85	185	..	..	..	..	..	..	..	..	..	..	..
Swedes	91.0	1.83	0.17	676	..	..	..	300	..	300	250	2 0	..	..	..
Mangold-wurzel	..	..	..	..	1: 7.26	891⅓	366	450	250	46	250	333	..	..	366⅔
White Silician beet	85.6	1.43	0.18	669	..	..	..	..	..	..	..	..	..	..	..
Carrots	87.6	2.40	0.3	3-2	1: 7.84	512.1	366	250	225	300	270	333	333	300	300
Potatoes	75 9	1.50	0.36	319	1: 9.	339 5–12	216	200	150	2 0	200	200	..	..	200
Potatoes kept in pits	76.8	1.18	0.30	383	..	..	400	..	..	..	..	..	..	..	..
Vetches (seed)	14.6	5.13	4.37	26	..	..	30	54	..	66	40	..	..	..	32
Beans	7.9	5.50	5 11	28	1: 2.8	24 5–12	30	54	50	75	40	..	..	..	30
Peas	8.6	4 2	3.84	27	1: 2.14	24½	30	54	48	66	40	..	..	..	30
Lentils	9.0	4.4	4.00	29	1: 1 87	22 1–12	..	..	..	..	..	..	..	..	..
Indian corn	18.0	2.00	1 64	70	1: 6.55	..	..	52	..	..	..	..	..	50	..
Buckwheat	12 5	2.40	2.10	55	1: 6.05	93 5–12	..	64	..	..	..	..	..	..	..
Barley	13.2	2.04	1.76	65	1: 4 25	..	33	61	53	76	50	..	..	..	35
Oats	12.4	2 22	1. 2	60	1: 4.08	58 11-12	39⅓	71	..	86	60	..	..	..	37⅓
Rye	11.5	2.27	2.00	58	1: 4 42	58 1–16	33	55	51	71	50	..	..	..	33⅓
Wheat	14.5	2 33	2.09	55	1: 2 42	38 5–6	27	52	40	64	40	..	..	..	30
Bran	13 8	2.77	2.30	50	..	..	..	..	..	..	..	..	..	..	..
Rice	13.4	1.39	1.20	98	1: 14.8	147⅔	..	..	..	..	..	..	..	..	..
Linseed-cake	13.4	6. 0	5.2	22	..	..	42	108	..	..	..	..	..	..	45
Rape-cake	14.5	5.50	4 12	23	..	..	..	..	..	..	..	..	..	..	..
Hemp-cake	5.0	4.78	4.54	27	..	..	..	..	..	..	..	..	..	..	..
Poppy-cake	6.8	5.70	5.36	21	..	..	..	..	..	..	..	..	..	..	..

The use of this table, (assuming it to be correct,) will be readily perceived. Thus 75 lbs. of clover hay contains as much nitrogen (that is, albumen, or the so-called flesh-forming constituents,) as 100 lbs. of meadow hay. This, according to Boussingault, indicates that 75 lbs. of red clover

hay is equal in nutritive value to 100 lbs. of meadow hay. PETRI & THAER estimate, from their experiments in feeding, that 90 lbs. of clover hay is equal to 100 lbs. of meadow hay; while BLOCK, PABET & SCHWERZ estimate meadow hay to be equal to clover hay. It will be seen that the theoretical estimate of clover hay is higher than the feeding trials will sustain. On the other hand, the practical farmers estimate carrots higher than chemists. The practical men, however, differ considerably among themselves as to the value of carrots. Thus, MEYA thinks 250 lbs. of carrots equal to 100 lbs. of hay, while BLOCK thinks it will take 366 lbs. According to BOUSSINGAULT'S analysis, it requires 382 lbs. of carrots to afford as much nutriment as 100 lbs. of meadow hay. The reason of this difference is probably owing to the method of feeding. A small quantity of carrots given in conjunction with dry food, will give a healthier tone to the system, and enable the stomach to digest the food better, and thus afford better results, than the mere amount of nutriment in the carrots would indicate. On the other hand, if carrots formed the principal food, this advantage would, in a great degree, be lost. It will be seen that BOUSSINGAULT'S own experiments in feeding cattle give results nearly identical with the theoretical estimate.

The same is true of other roots. They act, when given in small quantities, as a kind of tonic, or condiment. Thus ruta-bagas, or Swedes, are estimated very much higher by the practical men than by BOUSSINGAULT. Analysis indicates that 676 lbs. of ruta-bagas are only equal to 100 lbs. of hay, while PETRI and THAER think 300 lbs., and SCHWERZ 200 lbs. of this root is equal to 100 lbs. of hay.

There are many other points in the table worthy of attention, but the careful reader will not fail to see them. BOUSSINGAULT finds from his feeding experiments that Indian corn is more nutritious than his analysis indicates. This is undoubtedly the case; while it is equally true that peas and oil-cake, though highly nutritious, are somewhat overestimated by theoretical writers.

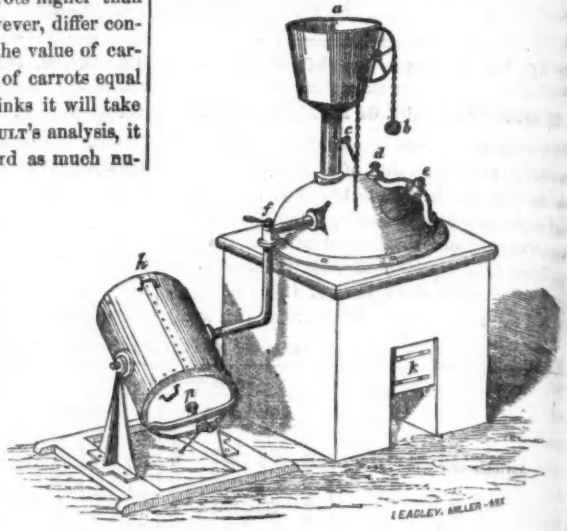
CURE FOR SCOURS IN CALVES.—Take skimmed milk and scald it; let it cool and skim again; put a table spoonful of powdered resin for a dose three times a day.—J. P.

COOKING FOOD FOR CATTLE.

OUR opinion has been asked in regard to the advantages of cooking food for cattle, and the best apparatus for the purpose.

That cooking renders our ordinary cattle food more easily digestible we think their can be no reasonable doubt. Whether the gain in this respect is equal to the cost and labor of cooking is another question. This would depend on a variety of circumstances. When food is cheap, it can not be cooked with as much profit as when it commands a higher price. With corn at 25 cents a bushel, and hay at a proportionate price, we cannot believe, as some assert, that cooking food for cattle can be profitable. Even in Great Britain, where cattle food is usually much higher than in this country, it is still a mooted question, after many years of trial, whether food can be profitably cooked for cattle. For swine, it is very generally considered profitable in England, to steam roots, potatoes, &c.—Grain is seldom either cooked for swine or cattle. The usual practice in fattening hogs is to grind barley or peas, and mix the meal with the steamed roots. Barley is often boiled whole for horses, and we can confidently recommend the practice from our own experience.

There can be no doubt that the process of cook-



RICHMOND'S STEAMING APPARATUS.

a, is the reservoir of water. *b*, balances the float on the water, and indicates its level. *c*, is the cock by which the water in the reservoir is allowed to enter the boiler, when it rises so high as to show that the boiler requires it. *d e*, is the opening corresponding to the "man-hole" in larger boilers, by which the interior may be examined and cleaned. *f*, the cock in the steam-pipe, by which the communication between the food and the boiler is opened or cut off. *k*, the fire-place. *h p*, the cylindrical receptacle for the food; *h* being the handle by which, when the top *p* has been removed, the cylinder is tilted up for the removal of its contents.

ing renders some portion of the food soluble that would otherwise be improperly digested. It also, in some cases, removes unwholesome matter, and renders that savoury which would otherwise be distasteful. A case of this kind is mentioned in a recent number of the French *Journal d'Agriculture Practique.* The refuse of immature sugar-beets, that proved deleterious to cattle, was rendered wholesome by steaming it. Mouldy hay, that cattle will eat only when starved to it, is devoured heartily after it has been cut into chaff and steamed.

In regard to the best apparatus for cooking food, there can be no doubt that steaming is much more convenient and economical than boiling, *except in the case of grain.* Dry steam will not cook sound, hard grain, unless it has been previously soaked in water; but for all other purposes steam is better than boiling water. There are quite a variety of steaming apparatus, but they all consist essentially of a boiler for generating the steam, and of a pipe for conveying it to the reservoir containing the food. It is convenient, for the purpose of filling and unfilling, that this reservoir should be slung upon bearings, so that it shall hang freely in any position, whether full or empty; and if the nozzle of the steam-pipe itself be one of these bearings, the mode of applying the steam to the material is greatly simplified.

We annex a cut of one of the best forms of steaming apparatus used in Great Britain.

EXPERIMENTS WITH ARTIFICIAL MANURES ON OATS.

We have made some experiments this year with a few artificial manures as a top-dressing for oats. The land was a clover-sod, plowed about the middle of May, and the oats sown May 20th. On the 26th of May, just as the oats were coming through the ground, the land was top-dressed with the following manures per acre:

No. 1—No manure.
" 2—600 lbs. of Plaster.
" 3—300 lbs. Superphosphate of Lime.
" 4—300 lbs. Sulphate of Ammonia.
" 5—300 lbs. Superphosphate of Lime, and 300 lbs. of Sulphate of Ammonia.

The oats were sown too late to obtain the best results. On another field of the same character where the oats were sown, about two weeks earlier, the crop was decidedly better. The experiments, however, were made with care, and are worthy of being put on record. The oats were cut August 28th. The straw and grain were both accurately weighed. This was done by weighing the whole crop—hay and straw—at the time it was drawn into the barn. After thrashing, the grain was weighed, and the amount deducted from the total weight of the crop. The chaff, therefore, is included with the straw. The result was as follows:

	Straw, per acre.	Grain, per acre.	Bushels per acre.	Weight, per bus.	Total, straw & grain
No. 1—	1,958 lbs.	792	36	22	2,750
" 2—	2,475 "	1,225	47	26	3,700
" 3—	2,475 "	1,050	50	21	3,525
" 4—	2,750 "	1,100	50	22	3,850
" 5—	2,575 "	1,150	51	22½	3,725

The most striking result is the effect of plaster, (gypsum or sulphate of lime,) on the quality of the grain. The oats on all the plots, owing to the late seeding, were very light, but where the plaster was used they were 4 lbs. per bushel heavier than on the unmanured land. In addition to this there was an increase of 11 bushels of oats and 950 lbs. of straw per acre from the use of plaster.

It is very evident that phosphate of lime had very little effect on oats on this land. The superphosphate used was a very superior article,* but contained—as a good article of superphosphate of lime always must contain—about 50 per cent. of plaster. Now this mixture of soluble phosphate of lime and plaster, (in other words, "superphosphate of lime,") did no more good than the plaster alone on No. 2, and therefore we may conclude that the addition of phosphate of lime was not needed on this soil for the oat crop. True, the plaster was applied in much larger quantity, but still it furnished no phosphates. Then, again, on No. 5, the superphosphate and ammonia together produced no more total produce than the ammonia alone on No. 4—in fact, not quite as much, though there is a slight increase of grain.

As we have before remarked, the oats on No. 2, where plaster was sown, weighed more per bushel than on any other plot. Taking the weight per bushel on the unmanured plot (22 lbs.) as the standard, the result would be as follows:

No. 1—No manure, - - - - 36 bus. per acre.
" 2—With Plaster, - - - - 55¼ " "
" 3—With Superphosphate, - 47¾ " "
" 4—With Sulphate Ammonia, 50 " "
" 5—With Superphosphate and Sulphate of Ammonia, together 52 " "

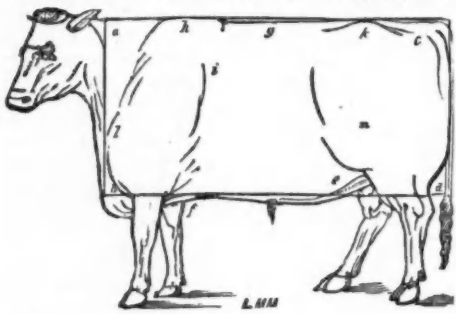
There are several points in these results which we do not understand, and further experiments are needed to enable us to come to anything like satisfactory conclusions.

* We had two tons of superphosphate of lime manufactured from burnt bones last spring under our own directions, expressly for experimental purposes. A better article could not be made, and yet on oats, potatoes and corn, it has done little good—not as much as plaster. This is in accordance with our former experiments. There may be soils where a direct application of phosphates is needed for corn and other cereals, but we think this is not the case, as a general rule, in Western New York.

RULES FOR JUDGING FAT CATTLE.

STEVENS, in his "Book of the Farm," gives some rules for judging fat oxen, from which we make a few extracts:

"When you look at the *near* side of a *ripe* ox in profile—and this is the side usually chosen to begin with—whatever be its *size*, imagine its body to be embraced within a rectangled parallelogram, as in

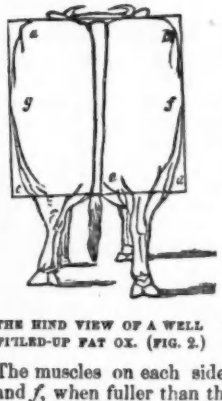


THE SIDE VIEW OF A WELL FILLED-UP FAT OX. (FIG. 1.)

fig. 1; and if the ox is filled up in all points, his carcass will occupy the parallelogram *a b c d* as fully as in the figure; but in most cases, there will be deficiencies in various parts—not that *all* the deficiencies will occur in the same animal, but different ones in different animals. The flank *e*, for instance, may be shrunk up, and leave a space there to the line; or the brisket *f* may descend much farther down than is represented; or the rump *c* may be elevated much above the line of the back; or the middle of the back *g* may be much hollowed below the line; or the top of the shoulder *h* may be much elevated above it; or a large space may be left unfilled in the hams above *d*. Then a similar survey should be made behind the animal; the imaginary line should inscribe it also within it the perimeter of a rectangled parallelogram, though of different form from the other, as represented in fig. 2, where the breadth of the hook-bones, *a* and *b*, is maintained as low as the points *c* and *d*; and the *closing* between the legs at *e* is also well filled up. This figure gives a somewhat exaggerated view of the appearance of a fat ox behind; but still it gives the form of the *outline* which it should have. Then go in front of the ox, and there imagine the outline of the body at the shoulder, inscribed within a rectangled parallelogram *a b c d*, fig. 3, of exactly the same dimensions as the one in fig. 2. The shoulder, from *a* to *b*, is apparently of the same breadth as across the hook-bones, from *a* to *b*, fig. 2. The off-side of the animal may of course be expected to be similar in outline to the near side. Having thus obtained an idea of the outline which a fat ox should have, let us now attend to the filling up of the area of the parallelogram.

On looking again at the near-side view, fig. 1, observe whether the ribs below and on each side of *g* are rounded, and nearly fill up the space between the more projecting points *h* and *k*, that is, between the shoulders and the hook. Observe also whether the shoulder *h* is flat, somewhat in the same plane as *g*, or more rounded and prominent; and whether the space behind the shoulder, at *i*, is hollow or filled up. Observe, again, whether the shoulder-point *l* is projecting and sharp, or rounded off; and whether the neck between *a* and *l*, is flat and sunk, or sweeps finely in with the shoulder. Observe yet more, whether the muscles at *m* are thin and flat, or full and rounded; and whether the hook-bone *k* projects or sinks in, or appear to connect itself easily with the rump *c* on the one hand, and with the ribs *g* on the other. With all these alternative particulars before you, they should be arranged in the following manner, to constitute *points* in perfection.

The line from the shoulder to the hook, from *h* to *k*, fig. 1, should be parrallel to the back-bone. The space on each side of *g*, along the ribs from *g* to *h*, and along the loins from *g* to *k*, does not fall in with the line *h* and *k*, but should be a little nearer, and almost as high as the back-bone, with a rounding fall of the ribs down the side of the animal. The loin, from *k* to *g*, should be perfectly flat above, on the same level as the back-bone, and drop down on this side, in connection with the utmost rounding of the ribs. The point of the hook *k* should just be seen to project, and no more; and the space between it and the rump *c* should gradually sweep round to the narrower breadth of the pelvis, as seen from *a* to *c* or *b* to *c* in fig. 4. *i* is placed at the utmost bend of the ribs, along which a straight line should touch every point through *i*, from the front of the shoulder to the buttock. The triangular space comprehended within *a h l*, should gradually taper from the shoulder-point to the head. A straight line from *l*, the shoulder-point, should touch every spot from it to *m*. The line of the back should be straight from *a* to *c*; the tail should drop perpendicularly from *c* to *d*; and the belly should sweep level, not high at *e* nor dropping at *f*. There are thus three straight lines along the side of a fat ox, from *a* to *c*, one through *i*, and from *l* to *m*. Proceeding behind the animal to fig. 2, the space between the hooks, from *a* to *b*, should be level, but a little rounded off at both ends, and the bone at the top of the tail only being allowed to project a little upward



THE HIND VIEW OF A WELL FITLED-UP FAT OX. (FIG. 2.)

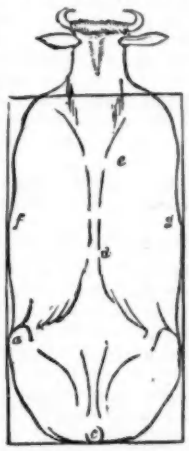
THE FRONT VIEW OF A WELL FILLED-UP FAT OX. (FIG. 3.)

The muscles on each side below the hooks, at *g* and *f*, when fuller than the hooks, is no *deformity*, but should they be no fuller, they are right. The muscles at *c* and *d*, down the side of the hams, are allowed to sweep gradually toward the hock joints of the legs. The *closing* at *e* should be well filled

up to furnish the rounds fully, but freely, for *packed* rounds prevent easy motion of the hind legs. Sometimes the tail is hid in a channel left by the muscles between *e* and *f*, but this is not usually the case. On going to the front view, fig. 3, the shoulder-top, between *a* and *b*, should be filled out with a natural round, and the muscles below it upon the shoulder-blades should always project farther than the breadth of the shoulder-top, and in this respect the fore-quarter differs from the hind, where the muscles below the hooks seldom project beyond them. The shoulder-points *e* and *f* should not be prominent, but round off with the muscles of the neck toward *g*, where the round of the front of the neck falls from the head to the breast, where the upper part of the brisket *f* meets it, and projecting a little in front, is rounded below and forms the lowest part of the body of a fat ox, and should be well filled out in breadth to spread the fore-legs asunder. The fore-legs are usually farther apart than the hind, but the hind at times, when the *shaw* or *cod* is large and fat, is as much or even more apart.

The objectionable deviations from these points are as follows: In fig. 1, a hollow back at *g* is bad, showing weakness of the back-bone. A high shoulder-crest at *h* is always attended with a sharp thin shoulder, and has the effect of bringing the shoulder-tops, *a* and *b*, fig. 3, too close together. A long distance between *g* and *k* makes the loins hollow, and gives to a beast what is called a *washy* appearance, and is always attended with a liability to looseness in the bowels. This washiness is generally attended with an inordinate breadth of hooks, from *a* to *b*, fig. 2, and causes them to project much beyond the muscles below. A sharp projecting hook is always accompanied with flat ribs at *g*, fig. 1, and ribs when flat give the animal a hollow side, which bears little flesh, the viscera being thrown down into the cavity of the belly, which droops considerably below the line; but in the event of the muscles of the abdomen having a greater weight to bear, they become thicker and stronger, and, accordingly, the flesh there becomes less valuable, and it has also the effect of thinning away the thick flank *e*. Flatness of rib is also indicative of hollowness of the space behind the shoulder, so much so, indeed, that the animal seems as if it had been gripped in too firmly there. As the flesh is taken away from the shoulder-blade by a sharp shoulder and hollow ribs, so the shoulder-joint *l* projects the more, and causes a thinness of the neck between *a* and *l*. The rump bone, at *c*, frequently rises upward, thereby spoiling the fine straight line of the back; and whenever this happens, the rump between *k* and *c* wants flesh and even becomes hollow, thereby much deteriorating the value of the hind-quarter. A projecting hook *k* also thins away the muscles about *m*, and behind it to the rounds; and this again is followed by an enlargement of the openings at the closing *e*, fig. 2. Whenever the shoulder becomes thin and narrow, when viewed in front, as in fig. 3, the shoulder-points *e* and *f* are wider than from *a* to *b*, and while this effect is produced above, the brisket *h* below becomes less fat, and permits the fore-legs to stand nearer each other. A greatly commendatory point of a fat ox is a level broad back from rump to shoulder, because all the flesh seen from this position, as is endeavored to be represented by fig 4, is of the most valuable description; where the triangular space included between *a*, *b*, *c*, is the rump; the triangular space between *a*, *b*, *d*, the loin; and the space between *d* and *e*, deflecting on both sides toward *f* and *g*, the ribs, the value of all which parts are enhanced the more nearly they are all on a level with each other.

All that I have endeavored to describe, in these paragraphs, of the points of a fat ox, can be judged of alone by the eye, and most judges never think of employing any other means; but the assistance derived from the hand is important, and in a beginner can not be dispensed with. The first point usually *handled* is the end of the rump at the tail-head, at *c*, fig. 1, although any fat here is very obvious, and sometimes attains to an enormous size, amounting even to deformity. The hook-bone *k* gets a touch, and when well covered, is right; but should the bone be easily distinguished, the rump between *k* and *c*, and the loin from *k* to *g*, may be suspected, and, on handling these places, the probability is that they will both be hard, and deficient of flesh. To the hand, or rather to the points of the fingers of the right hand, when laid upon the ribs *g*, the flesh should feel soft and thick and the form be round when all is right, but if the ribs are flat the flesh will feel hard and thin, from want of fat. The skin, too, on a rounded rib, will feel soft and mobile, the hair deep and mossy, both indicative of a kindly disposition to lay on flesh. The hand then grasps the flank *e*, and finds it thick, when the existence of internal tallow is indicated. The cod is also fat and large, and on looking at it from behind seems to force the hind legs more asunder than they would naturally be. The palm of the hand laid along the line of the back from *c* to *h* will point out any objectionable hard piece on it, but if all is soft and pleasant, then the shoulder-top is good. A hollowness behind the shoulder at *i* is a very common occurrence; but when it is filled up with a layer of fat, the flesh of all the fore-quarter is thereby rendered very much more valuable. You would scarcely believe that such a difference could exist in the flesh between a lean and a fat shoulder. A high narrow shoulder is frequently attended with a ridged back-bone, and low-set narrow hooks, a form which gets the appropriate name of *razor-back*, with which will always be found a deficiency of flesh in all the upper part of the animal, where the best flesh always is. If the shoulder-point *l* is covered, and feels soft like the point of the hook-bone, it is good, and indicates a well-filled neck-vein, which runs from that point to the side of the head. The shoulder-point, however, is often bare and prominent. When the neck-vein is so firmly filled up as not to permit the points of the fingers into the inside of the



BACK VIEW OF A WELL FILLED FAT OX. (FIG. 4.)

shoulder-point, indicates a well tallowed animal: as also does the filling-up between the brisket and inside of the fore-legs, as well as a full, projecting, well-covered brisket in front. When the flesh comes down heavy upon the thighs, making a sort of double thigh, somewhat like the shape at *d* and *e*, fig. 2, it is called *lyary*, and indicates a tendency of the flesh to grow on the lower instead of the upper part of the body. These are all the *points* that require *touching when the hand is used;* and in a high-conditioned ox, they may be gone over very rapidly.

SHEEP IN CALIFORNIA.

We have met with capitalists who have invested largely in sheep, some of them buying their five, ten, or twenty thousand head at the commencement, thinking they could make it pay, in accordance with the extraordinary increase known to attend this valuable animal in California. Most of these persons, thus purchasing largely, have failed to meet their anticipations, and in no long time, have been found selling off their large flocks in small parcels, as they could best find purchasers. This exactly demonstrates what has long been an admitted principle of business, that if you would achieve eminent success, it must have its commencement from small beginning; because, in the small business of an enterprise, one becomes thoroughly acquainted with all those minute details which qualify for the successful management of those of increasing dimensions.

In no department of industrial life does this rule apply with greater force than in the business of sheep raising. Where the capitalist begins with his five thousand, or more, as may be, he is not likely to have made suitable arrangements for their proper care. The idea is entirely too prevalent, that sheep need no feeding in winter, except what they can glean from the barren fields; then again, there will not be adequate shelter from the storms; or perhaps they are crowded into suffocating pens, so that they smother, or are infected from contact with diseased animals, which would have been removed, had they been in subdivided lots, so as to have been within frequent observation. We are satisfied that, in order to make wool-growing a highly remunerative business to California, it must fall into the hands of a great number of small proprietors; or where it is under extensive ownership, it must be farmed out to persons of sufficient intelligence to learn the habits of this tender animal. Doubtless, if large sheep owners were to subdivide their flocks into not more than one thousand in each, and give them in charge of suitable persons on shares, it would be better for the capitalist, than to have them kept in large droves under stupid and careless hirelings.

As an instance of individual success from a small beginning, we trust we shall be pardoned for making public a statement given us by our old friend B. E. Rynders, formerly a merchant at San Antonio, Alameda county, now a resident of Livermore valley. In December last, Mr. Rynders bought three hundred and forty American ewes, with a slight cross of French merino, and four half-blood merino bucks. The ewes cost six dollars each, and the bucks fifty each, making and outlay, for stock, of two thousand two hundred and forty dollars. He has sold eighteen hundred lbs. of wool at twenty cents—three hundred and sixty dollars—and has four hundred and sixty lambs, worth five dollars each, as they are nearly half-blood merino, which is two thousand two hundred dollars; which, with fleeces sold, makes the sum of two thousand five hundred and sixty dollars, as the product of a six months investment of two thousand two hundred and forty dollars.—*California Culturist.*

SALT FOR WORKING CATTLE—AGAIN.

Eds. Genesee Farmer:—"O. W. T.," of Elm Tree Farm, Maine, in the *Genesee Farmer*, for Oct., page 309, answers inquiries about "Salt for Working Oxen," and hopes others will do the same. Deeming the conclusions erroneous, to which friend "O. W. T." arrives, from his and Boussingault's experiments, I accept his invitation to answer also.

It has never, to my knowledge, been claimed by any scientific experimenter that the use of salt in any way (unless applied to the land,) increases the flesh or fat of animals; on the contrary, the most careful experiments of man go to show that it diminishes rather than increases the amount of fat, and acting on this theory, its liberal use is prescribed for obesity; but it is not on this account recommended to the lean to abstain from it. Its moderate use is known (begging the pardon of the vegetarians,) to be conducive to health; and if, as our Maine friend says, there is salt enough in the constituents of the food of cattle, is there not full as much in man's food, aside from what he put in himself. And still no man without a hobby, has ever discovered that man should not salt his potatoes if it improves the relish. All our domestic animals, as well as all the wild ruminates, have a relish for salt, and it seems to be required by them rather as a medicine than a condiment, or as food; for none seem to desire it daily throughout the year; and those who do not live near it make long pilgrimages to obtain it, and when the appetite is satiated, they return to their old haunts.

I do not believe that the indulgence of a natural appetite ever leads man or beast into error; still, if that natural appetite is not gratified, disorder, or weakness of the digestive organs may ensue in consequence, which, if followed by full indulgence, may produce bad effects. From no other reason than this, I venture to say, was any animal ever injured by any quantity of salt he chose to eat.

All brutes have habits peculiar to their species, and though many of them seem unaccountable, still I think none are without their use. The hen wallows in the dirt, the horse rolls in the ploughed ground, and the ox paws the dirt, and rubs his neck against the bank of earth, all for one purpose, to prevent or destroy the vermin, with which they are liable to be infested, and if left free to act for themselves they never suffer from vermin while the ground is bare, unless they become too weak to help themselves. It is very interesting to observe with what precision the cow, with her round sole, will throw the dirt upon her back; the horse will eat earth; the hog ashes and charcoal; the bird lime and pebbles; and all to supply some want of the body. Salt is destructive to internal vermin, to which all animals are more or less liable, and it

is said that no horse has the botts which has all the salt he craves.

But this is not the only use of salt in the animal economy, as we shall see. BOUSSINGAULT'S experiment was evidently for the purpose of testing the direct effect of salt upon the production of fat or flesh. Mr. DICKINSON, of Steuben Co., N. Y., finds by experiment, that his cattle thrive better without shade. He is surely good authority; but his experiments would have been more conclusive, as regards health and longevity, if he had experimented upon his roadsters for a series of years.

As to the effect of salt upon health, I beg leave to quote from Prof. JAMES F. JOHNSTON, of Scotland, who has evidently made the subject a study:

"The wild buffalo frequents the salt-licks of North-western America; the wild animals in the central parts of Southern Africa are a sure prey to the hunter, who conceals himself behind a salt spring; and our domestic cattle run peacefully to the hand that offers them a taste of this delicious luxury. From time immemorial it has been known that without salt man would miserably perish; and among horrible punishments, entailing certain death, that of feeding culprits on saltless food, is said to have prevailed in barbarous times. Maggots and corruption are spoken of by ancient writers as the distressing symptoms which saltless food engenders; but no ancient, or unchemical modern, could explain how such sufferings arose. Now we know why the animal craves salt; why it suffers discomfort, and why it ultimately falls into disease if salt is for a time withheld. Upwards of half the saline matter of the blood (57 per cent,) consists of common salt; and as this is partly discharged every day through the skin and the kidneys, the necessity of continued supplies of it to the healthy body becomes sufficiently obvious. The bile also contains soda as a special and indispensable constituent, and so do all the cartilages of the body. Stint the supply of salt, therefore, and neither will the bile be able properly to assist the digestion, nor the cartilages to be built up again as fast as they naturally waste."

And now, I would say to our friend A, let your horses, oxen, sheep and pigs, have all they will eat, and the surest way is to let them have access to clear salt at all times; only if they have suffered from abstinence, be cautious at first, just as you would with yourself, if you had suffered long with hunger. SANTE.

Muskegon, Mich., Oct., 1860.

HOW TO THROW AN OX.

EDS. GENESEE FARMER:—A few mornings since, the little boys said to me: "Grandpa, Dimon steer (a stout one three years old,) has got the heel and ancle of his left hind foot filled with hedgehog quills."

I soon found that if I attempted to do much with him, while standing, I should be likely to have his foot in my face. Forthwith I called help from the neighbors, obtained a bullet-mold for nippers, and took head-ropes from the stable.

We placed the steer on smooth ground, and commenced operations by taking up his left or near side fore foot, and tying the foot fast to the leg above the knee; next reaching under the belly and tying a rope around the ancle of both the off side fore and hind feet.

Placing a man the off side of his neck to attend to his head in the fall; myself and another man the near side, each hold of a rope fast to the ancle, commenced pulling gently on the ropes—crowding a little at the same time against his sides. The steer, as though understanding he had rather lie down than to catch a fall, readily dropped on his knees and down upon his side. The rope on the fore foot was brought over his shoulder and held, and the rope on the hind foot carried back and held. The steer lay with but little struggle; with the bullet-mold the quills were soon all drawn out, and the steer went off well. L. HENDRICK.

Sweden, Potter Co., Pa.

WEEK EYES IN CATTLE—BREEDS OF HORSES.

EDS. GEN. FARMER:—In the July Number, is an inquiry whether there can be anything done for a cow, whose eyesight fails at sun set. In answer, I would say there can, if done in season. I have had great experience in the care and management of stock for the last twenty-five years, and have seen three cases exactly like the one described, with this addition: the cows could not see in a cloudy day. In two cases it was caused by Hooks, a disease which all Stock Raisers are acquainted with; where this is the case the film skin that covers the lower part of the eye ball, becomes enlarged and looks inflamed. Cure.—Take a needle and draw a thread through the enlarged part, raise it up and cut it off; this disfigures the eye a little. Another plan is to put a rowel in about two inches below the eye. The other case was caused by the hollow horn, this was cured by removing the cause.

On the same page is an inquiry as to what is the best breed of horses for harness. I would say, from experience and observation, raise horses that will weigh from eleven to thirteen hundred lbs., of a stock that are reasonable travelers, like the old Messenger, or Duroc breed, then you always have horses that can perform labor; but if you undertake to raise smaller and faster stock, like the Black Hawk or Morgan, if you do not get a colt that will command a price for speed, which is only one in a hundred, you have an inferior animal for farm purposes because he is too light for the plow.

Otsego Co., Mich. JAMES A. LEE.

CHEAP LAND IN CONNECTICUT.

THE *Homestead*, published at Hartford, Ct., in alluding to Mr. WATSON'S pamphlet on the uncultivated lands of Long Island, remarks:

We have thousands of acres in Connecticut, really uncultivated, whatever they may be called, that can be purchased as cheaply as those Long Island lands, and that may be redeemed more economically. They do not lie in a wilderness, like most of the pine barrens, where the churches and school houses are to be built, and the roads and bridges are to be made, and the brushes and trees are to be cleared off, and the fields are to be fenced. They lie in the midst of civilization, and of religious institutions, the fences all made, within sound of the railroad whistle and the church-going bell. The school house, with white walls and green

blinds, is just round the corner, and the grist-mill is at the foot of the hill. There is a hungry market within an hour's ride of the door, for everything that can be raised on the soil.

Many of these lands can be bought for twenty dollars an acre, with all the buildings upon them, or from five to ten dollars an acre without the buildings. All that is needed to bring them up into a high state of productiveness, and to make them pay the interest on two hundred dollars per acre, is skill and capital. To make money by farming, pure and simple, we believe there is no better field than these cheap farming lands in our own State. If a man wants to speculate or to get rich by the gradual rise of lands, let him go West. But if he wants to gain a competence, and a comfortable home, and to educate his children for usefulness and happiness, let him develope the resources of these neglected, half-tilled farms.

ANIMAL FOOD AND BREAD.—A paper was recently read before the London Chemical Society by Dr. GILBERT, on the composition of the animal portion of human food, and on its relations to bread. The general conclusions were, that only a small proportion of the increase of a fattening animal was composed of nitrogenous matter; that from five to ten per cent. only of the nitrogenous matter of the food was stored up in the body of the animal; but that the amount of fat stored up was frequently greater than the amount supplied in the food, despite the loss incurred in the maintenance of the respiratory functions. Hence, the comparative value of fattening foods was proportional rather to the amounts of respiratory than of assumed flesh-forming constituents. It was calculated that in those portions of the carcasses of oxen actually consumed as human food, the amount of dry fat was from two to three times as great as the amount of dry nitrogenous matter; and in the eaten portions of the carcasses of sheep and pigs, more than four times as great. By substituting for the above proportions of fat, their respiratory equivalents in starch, so as to allow of a comparison between meat and bread, the ratios become six or seven to one, and eleven to one respectively. From various determinations made by a number of experimenters, it appeared that in wheat bread the ratio of starchy to nitrogenous matter was six or seven to one; so that in bread the proportion of animal flesh-forming constituents to respiratory constituents was greater than the eaten portions of sheep and pigs, and quite equal to that of the eaten portions of oxen—a conclusion altogether opposed to the prevalent notions on the subject.

RATS OUT OF THE GRANARY—DOLLARS IN POCKET.

EDS. GEN. FARMER:—D. N. D., in the October number of the *Farmer*, inquires, "What is the best method of keeping rats out of the corn-crib or granary." Now the "root of all evil" in this case usually lies in the manner of building. It is a matter of some difficulty to build a corn-crib or granary so tight that it will effectually resist the perseverence of these destructive little animals. I will give your correspondent and readers a plan which, if followed, may be the means of saving a great quantity of grain which would otherwise be destroyed.

Frame the building in the ordinary way, and the difference in construction must be in the foundation. Instead of the common stone foundation, select good sticks of oak timber, from 14 to 16 inches in diameter, and about 6 feet in length. These should be sunk firmly in the ground about 3 feet deep, leaving the tops to project out of the ground about 2½ feet. The top of these pillars above ground should be hewn and planed very smooth into the shape of a frustrum of a cone, the upper diameter of which may be 6 or 7 inches. Place caps two feet square upon the pillars, and rest the sills upon them. The points of support in any building should not be wider apart than 8 feet. Quite clear of every obstacle the granary must be kept, and no communication with the ground allowed to remain, other than the posts which support it, or the rats will climb up; but since they can not walk like a fly on the ceiling, if the plan I have given is adopted, my word for it, your correspondent will have no rats in his corn-crib.—HENRY B., *Ohio.*

DICKENS ON DONKEYS.

I HAVE known a donkey—by sight; we were not on speaking terms—who lived over on the Surrey side of London bridge, among the fastnesses of Jacob's Island and Dockhead. It was the habit of that animal, when his services were not in immediate requisition, to go out alone, idling. I have met him a mile from his place of residence, loitering about the streets; and the expression of his countenance at this time was most degraded. He was attached to the establishment of an elderly lady who sold periwinkles, and he used to stand on Saturday nights with a cartful of delicacies outside a gin-shop, pricking up his ears when a customer came to the cart, and too evidently deriving satisfaction from the knowledge that they got bad measure. His mistress was sometimes overtaken by inebriety. The last time I ever saw him (about five years ago), he was in circumstances of difficulty, caused by this failing. Having been left alone with the cart of periwinkles, and forgotten, he went off idling. He prowled about his usual low haunts for some time, gratifying his depraved taste, until, not taking the cart into his calculations, he endeavored to turn up a narrow alley, and became greatly involved. He was taken into custody by the police, and the Green Yard of the district being near at hand, was backed into that place of durance. At this crisis I encountered him; the stubborn sense he evinced of being—not to compromise the expression—a blackguard, I never saw exceeded in a human subject. A flaring candle in paper shade, stuck in among his periwinkles, showed him, with his ragged harness broken, and his cart extensively shattered, twitching his mouth, and shaking his hanging head, a picture of disgrace and obstinacy. I have seen boys taken to the station-house, who were as like him as his own brother.—*All the Year Round.*

BEE STEALING.—The Sacramento (California) Apiarian Society, offers a reward of $50 for satisfactory evidence of any one who is in the way of setting up decoy hives for catching other people's bees.

LIME AND WHEAT.

GEORGE H. CHASE, an enterprising young farmer of Union Springs, N. Y., has tried an experiment the present season with salt, ashes, and lime, on wheat. An acre each was selected for the three experiments. About two barrels of salt were applied to one, two two horse loads of ashes to a second, and a hundred bushels of lime to the third acre. The result has not been measured as yet, but the effects of each are very visible. The salt proved least useful; the ashes more so; and the lime most so of all. The line of superiority marking the boundaries of the limed portion was as distinct as a line fence. The increase of the crop by liming, over the portions not dressed with anything, is at least ten bushels per acre.

The question occurs whether a smaller quantity of lime would not have produced an equal result. This will receive the test of another trial. The land is a strong or clayey loam; and, what is worthy of notice, is in the midst of a limestone region, where the country is underlaid by the rocks of the corniferous limestone, which is abundantly scattered over the surface. But acids do not show carbonate of lime in the surface soil.—*Co. Gent.*

SUGGESTIONS ON MENTAL AND PHYSICAL LABOR.

If theory and practice are inseparably dependent on each other for success, why do we find so many men denouncing the theoretical? If your neighbor has success in following the idea of his *new plan*, as you term it, why will you not leave your time-worn practice, and take advantage of expensive experiments?

The order of things must change in proportion to the change of things themselves. The farm in its virgin state needed but slight cultivation to produce as much or even more than it will now by force of application. If I can crop successfully by applying a theory that has proved adaptable to to a certain section, why should I be opprobriously termed a book farmer? As for me, I love to scan and sort the ideas of others, and apply them so far as I am conscious of their practical utility.

If the scientific man finds it imperative to develop both the mental and physical, has not the farmer the same functions? Is he not more intimately connected with nature—organic and inorganic? That which a man sees every day should be familiar; and it is not only a privilege, but a duty, that we should extend our knowledge to our fellow men. Others taught you; why not teach them? thereby complying with the design of human nature, and feeling satisfied that you have benefited one or more of the human family. There are none so illiterate as not to have their own influence.

The mind can comprehend more in a moment of time than the hands can perform in months or years—an invaluable agent. If calculation is economy, why not exercise its power and enlarge its basis? How many extra steps it might have saved had I only had my wits about me, says one; if I had only *thought* to have put a bolt, small screw, piece of rope or string, or even a nail, in my pocket this morning; but the accident requires it, and off we must go to get a supply. Time to the farmer is precious, especially at certain seasons; and here is labor for the mind. Man determines the amount to be done and the time to do it in, and his perfect calculation will make the two meet.

He that is capable of performing much, let him perform much, and he little, perform little. There are many men that can accomplish more with the brain than half a dozen with their hands, and derive as much profit. Why is it? If calculation is applicable to every action, why can not some persons, when conducting one piece of labor, conduct more at the same time, and not get some of "their irons burnt."

Many workmen commence without thinking how long they are to be employed. This should not be. Cause the mind to perform a part; study into all the ingenious contrivances of the day and age, and apply them; devise for yourselves. If the farmer is not to be a thinking man, who is? Who has a greater number of questions and ideas to perplex the brain? W.

Penfield, N. Y.

SHOULD SEED WHEAT BE BROUGHT FROM THE SOUTH OR NORTH?

EDS. GENESEE FARMER:—I perceive from the remarks of N. S. N., in July number of the *Farmer*, that the mooted question of "Whether wheat for early ripening should be brought from the North or South," is yet unsettled.

Near the city of Edinburgh, in Scotland, is a tract of land cultivated by intelligent, scientific farmers. These practical men, every two or three years, import their seed wheat from the London market, three or four hundred miles south of them, and it pays well, as they gain two weeks or more in that cool, dripping climate—where I recollect the papers stating, one wet season, they had not been able to gather their oats yet in December.

For corn, the very reverse of this should be the rule. If it is important to have corn to ripen early, bring it from the North, where it must mature early or be caught by the frosts. I have raised corn, Gourd seed, from the rich Miami bottoms near Cincinnati; it grew large and very promising, but its habit of late ripening exposed it to frost in the last of September, and but few sound ears could be found in a ten-acre field. C. P.

Mansfield, O.

JOHN WALTON'S FARM.

"HADN'T you better subscribe for it?"

"I tell you, no. I haint got the money to spare; and, if I had, I haint got the time to waste over newspapers," said Eben Sawyer, with some emphasis.

"But you will gain much information from it in the course of the year, sir," pursued John Walton.

"I tell you, I don't want it!"

"Well, what do you say, Mr. Grummet? Shan't I have your name?"

"No, sir!" This was spoken so flatly and bluntly, that Walton said no more; but folded up the prospectus of a periodical which he had with him, and then turned away.

Eben Sawyer and Ben Grummet were two old farmers—that is, old at the business, though they had only reached the middle age of life: and after their young neighbor had gone, they expressed their opinion concerning him.

"He'll never make a farmer," said Sawyer, with

a shake of the head. "He spends too much time over them papers and books of his'n. He's a leetle mite above farmin', in my opinion."

"Them's my sentiments," responded Grummet. "I tell you, Eben, a man that thinks to make a livin' on a farm in this country, has got to *work* for it."

At this juncture, Sam Bancroft came past. He was another old native of the district.

"We was just talkin' about young Walton," said Sawyer.

"I've just come from there," replied Sam.

"He's been borin' me to sign for a paper; but he couldn't come it!"

"Ha, ha!—so he bored us. He's gettin' a leetle too high for a farmer."

"He's rippin' his barn-floor up!" said Bancroft.

"Rippin' the floor up!" repeated Grummet. "Why, Mr. Amsden had the whole floor put down new only three years ago."

"The stable floor, I mean," pursued Bancroft. "He's got a carpenter up from the village, and his two hired men are helpin'."

"Whew! I opine he'll make a farmer!"

And so they all opined—with a reservation. In short, there was something highly ridiculous in the thought of a man thinking to be a farmer and a student at the same time; and all sorts of jests were discharged over it.

John Walton was a young man—some five-and-twenty; and though he had been born in the neighborhood, yet much of his life had been spent in other portions of the country His parents both died when he was quite young, and his father's farm passed into the hands of a Mr. Amsden. But now John had married, and he meant to be a farmer; and his thoughts naturally turned to the old homestead. He found Amsden willing to sell, and he bought—paying five hundred pounds down, and giving a note and mortgage for five hundred, which had been cashed by Mr. Piddon.

This farming district was upon a broad ridge of land, which had been cleared for a great many years; and though they were the handsomest and smoothest-looking farms in the parish, yet they were by no means the best. The summit of the ridge was crowned by a ledge of granite, and the soil, over the whole broad swell, was more or less wet and cold. This was particularly the case with John Walton's farm, some portions of it being wholly unfit for cultivation. There was one field of over twenty acres which was never fit for plowing. The soil was so wet and heavy that it never had been worked to any advantage; yet there was some good land upon it, and Mr. Amsden had gained fair crops while he lived there.

Ben Grummet had a curiosity to see what was going on in Walton's barn, so he dropped in there. He found that the whole of the floor, where the cattle stood, had been torn up, and that they were digging a wide, deep trench, the whole length of the tie-up.

"What's all this for?" asked Ben.

"Why," returned Walton, who was busy in superintending the work, and also in working himself, "I am having a placed fixed here for making manure. I mean to fill this trench up with good muck, and thus save the liquids which have heretofore been lost. I think, by proper management, I can get full double the quantity of manure which others have got on this place."

"Do ye?" said Grummet, sarcastically.

"Yes," resumed the young man. "It is a fact that the liquid manures, could they be saved, would fully equal the solids, both in bulk and value; and when combined with well-rotted muck, and some other articles which shall take up and retain all the more volatile parts, I feel sure that they will afford more fertilizing powers and properties than the solid manures can."

"You don't say so! Where d'ye larn all that?"

"Partly from reading, and partly from observation," answered John, smiling at his good neighbor's open sarcasm.

"I don't s'pose it costs anything to do all this?"

"Oh, yes, it will cost me considerable before I get through."

"Yes: I should think 't would."

"I say!" he cried, as he met Sawyer shortly afterward. "John Walton's about as high bein' crazy as a man can be!"

"Eh?—crazy, Ben?"

"Oh, he's got his head full of all sorts of nonsense. He's got his stable floor all torn away, and a trench dug there big enough to hold mor'n twenty cart-loads of dirt."

"But what in natur's he goin' to do?"

"Why, he's goin' to save the liquids, as he calls 'em! And he's goin' to put in somethin' to take up the—the—*vol—voluntary* parts."

"*Voluntary* parts? What's them, Ben?"

"It was *vol* somethin'. But I don't know. I wouldn't ask him. I s'pose he just used the outlandish word so's to get me to ask him what it meant—an' then he'd show off his larnin'. But I wasn't so green."

"I wonder if he thinks he's a comin' here to larn us old farmers how to work?" said Sawyer, rather indignantly.

"He thinks so," returned Grummet.

"Then he'll find out his mistake," added the other. "You mark my words, Ben. He'll be flat on his back afore two years is out!"

And these were not the only ones who looked for the same thing. The idea of a man's coming in there with any such new-fangled notions, was absurd.

Autumn came, and after John Walton had mowed over his twenty-acre field—some of his coldest and stiffest land—getting hardly hay enough to pay for the labor, he set men at work digging deep trenches all over it. He had two dug lengthwise, running up and down the slope; and then he dug quite a number running across these. They were quite deep and broad, and into them he tumbled nearly all the stones that could be found in the fields.

"A pooty expensive way of gettin' rid o' rocks," remarked Grummet.

"It's a better place for them than on the surface, isn't it?" returned Walton, with a smile.

"Perhaps. But what on earth are ye doin' it for?"

"Why, I'm going to see if under-draining won't improve the land."

"*Under-draining!* What's that?"

"It is simply drawing off the water from the surface. This land is cold and wet: but if I can get the water to drain off among these rocks, the sun

may warm the surface, and give me a good piece of soil here."

But it looked very foolish to Ben Grummet. He believed that "what was the natur' of the soil couldn't be altered."

"That's a cur'us contrivance," said Sam Bancroft. He and Ben Grummet had been at work for Walton at hauling muck. He alluded to a large vat at the back of the house, into which ran a spout from the sink. The vat was capable of holding several cart-loads of stuff, and was already half full.

"That's a compost vat," explained Walton, who had overheard the remark. "All the slops from the house, the soap-suds, and such stuff, which most people waste, I save by this means, and turn to good account; and instead of throwing away refuse matter, I put it in here, and let it rot and ferment, and make manure."

"But what's this charcoal dust for?"

"It answers two purposes, though by only one office. It takes up the ammonia and other volatile matter, thus holding them for fertilizing agents; and, at the same time, prevents the disagreeable effluvia which would otherwise arise from such a fermenting mass."

"That all sounds very well," remarked Ben, after Walton had left them; "but, let me tell you, *it don't pay!* He'd better let such fandangles alone, if he ever expects to make a livin' at farmin'."

Before the ground froze in, Walton threw out most of the muck behind his stable, which had become well saturated, and filled the trench up anew.

The old farmers had a great many apple trees, and made a great deal of cider; but the fruit was of an inferior quality. When spring came, Walton went to some of his neighbors, and asked them to go in with him, and send for some good scions to engraft upon their apple trees. He explained to them just the plan he had formed for his own orchard. He had engaged a competent man to come and do the work of grafting, and, while they were about it, it would be cheaper to get grafts enough for the whole neighborhood.

It was of no use. The old orchards were just such as their fathers had, and they were good enough. So Walton went at it alone. He had his trees all pruned and dressed, and nearly all of them grafted to such fruit as he thought would thrive best and sell best.

A little while later, and Ben Grummet had occasion to open his eyes. He found that John Walton had contrived to have one hundred and forty full loads of manure, all of which had been made within the year. However, he finally shook his head, and said, "Wait; we'll see if it's good for anything."

A little while later, and the grass began to spring up on the twenty-acre lot as it had never sprung up before. The two acres, which had been plowed and harrowed up light and fine, bore the best crop of corn that was grown in the whole county, and and all the manure put upon it was some which had been manufactured.

And so the time went on, and John Walton was continually studying how to improve his farm. At the expiration of a few years, the new scions had grown large and strong in his orchard, and began to bear fruit. He had taken care of his trees, and they were about ready to return him interest for the labor.

"Good gracious!" ejaculated Eben Sawyer, as Ben Grummet and Sam Bancroft came into his house one cool autumn evening, and the three filled their mugs with new cider; "have you heard about John Walton's apples?"

"I knew there was a man up to look at 'em," returned Ben; "but I ain't heard no more."

"Well, I was there, and heerd the whole on't—so I know—I never would 'ave thought it. An orchard turn out like that!"

"But how much was it?"

"Why, Walton was offered—cash right down—a hundred pounds for the apples he's got on hand; and he tells me that he sent nearly fifty pounds' worth of early fruit off a month or more ago."

It was wonderful—more than wonderful! But they had to believe it.

"And look at that twenty-acre field," said Bancroft. "Ten years ago it wouldn't hardly pay for mowin'; now look at it. Think o' the corn and wheat he's gained there; and this year he cut more'n forty tons of good hay from it!"

"But that ain't half," interposed Sawyer. "Look at the stock he keeps; and see what prices he gets for his cows and oxen. Why, he tells me he's cleared over four hundred pounds this year on his stock."

At this moment Mr. Walton came in. He had grown older, and was somewhat stouter than when he first became a farmer; and his neighbors had ceased to question his capacity, and had come to honor and respect him.

"We was talkin' about you, Mr. Walton," said Sawyer.

"Ah!" returned John, as he took a seat by the fire. "I hope you found nothing bad to say of me."

"Not a bit of it. We was talkin' about the wonderful improvements you've made on the old place, and of the money you make."

"And do you think it wonderful?"

"But ain't it?"

"Well," replied Walton, "I don't know about that; but I'll tell you what I do know. I know there is no class of people in the world who may study the arts and sciences to better advantage than farmers; and yet, I am sorry to say, there is no class, as a class, occupying the same social position who read and study less; of course there are many honorable exceptions. Farming is a science—one of the most deep and intricate—and he must be a man of more than ordinary capacity who can master it all. But farmers must not be afraid of books; they won't, if they are wise, follow every advice which experimentalists give; but they may study, and reason, and experiment for themselves. So I have done, and so I mean to do."

"He's right!" remarked Ben Grummet, after Walton had gone. "What fools we was that we didn't go into that graftin' operation!"

"And that underdrainin'," added Bancroft.

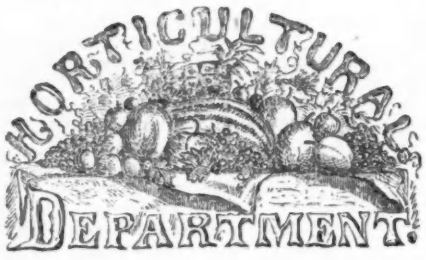
"And that muck and compost arrangement," suggested Sawyer.

"Well," said Ben, with a serious face; "it isn't too late now. They say, it's never too late to learn; and I'm sure it hadn't ought to be too late to commence to improve after a body has learned."

"True as a book!" added Bancroft.

"Good evening!"

"Good evening!"



THE CULTIVATION OF BLACK CURRANTS FOR WINE IN FRANCE.

Prof. Decaisne in his recent work, the *Jardin Fruitier*, publishes a communication from Dr. Maillard, of Dijon, in regard to the cultivation of Black Currants for the manufacture of liqueur in the Department of the Côte-d'Or.

It appears that the first attempts at preparing Black Currant liqueur were made in 1841, and since that time the manufacture has so rapidly increased, that at Dijon alone there are now three first-class houses, producing together 88,000 gallons; six second-class ones producing 66,000 gallons, and at least 20 others manufacturing a like quantity. Establishments also exist at Beaune, and other small towns in the same district; producing in all, 880,000 bottles.

"Up to the present time the production of the article in the Côte-d'Or has depended upon the supply of fruit, which has frequently proved unequal to the demand, and has had to be brought from considerable distances. Even in the neighborhood of Lyons, Black Currants are now cultivated for the Dijon market. For the first few years, when the success of the manufacture remained uncertain, the owners of vineyards confined themselves to planting Black Currants here and there among Vines, and by the sides of roads and footpaths, so as not to risk any considerable outlay of capital or loss of ground. But the manufacture is now so well established that landowners are cropping their land with Black Currants alone, the number of plants introduced into Vineyards being also on the increase. The rage, indeed, for planting was so great in 1857 that rooted plants sold as high as $16, and even $24 per thousand. Now, however, price has found its usual level, that of $4 to $6 per thousand. The exact number of plants cultivated round Dijon does not seem to be ascertainable, the proprietors themselves not knowing how many they have planted. It is, however, probable that to estimate the number near Dijon at 1,500,000 would be greatly below rather than above the mark.

"In the Department of the Côte-d'Or, the centre of Currant cultivation exactly coincides with that of the Vine. In fact, it may be said to extend from Chagny to Dijon, in a narrow zone skirting the eastern slope of the mountain chain of the Côte-d'Or, 18 to 25 miles in length, and from one to three miles in breadth. Within these narrow limits are to be found all the great growths of Burgundy wine, connected by Vineyards only producing *Vin ordinaire*. It is among these, and in land of a similar nature, that the Black Currant is cultivated. Many of the villages producing large quantities of the latter, are noted for the excellence of their wines, as for example—Volnay, Beaune, Aloxe, Savigny, Prèmeaux, Nuits, Vougeot, Chambolle, Vosne, Morey, Gevrey-Chambertin, Brochon, Fixin, Marsannay, Talant, Fontaine. Leaving this centre the Currant follows the Vine in the valleys that traverse the mountain range toward the west; there are extensive plantations at Nolay, Plombières, Malain, Laumes, and Montbard, and others occur occasionally in the large and fertile plain which extends from the foot of the Côte-d'Or chain to the Saône, and in which the Vine is not cultivated. Finally they are to be found in the department of the Saône-et-Loire, particularly in that part of it which adjoins the Côte-d'Or. Rather considerable plantations also occur near Autun and Châlon-sur-Saône.

Contrary to what might have been expected in fruit with so strong a flavor, there exist great differences in the quality of the Currants from different localities. The French liqueur makers easily distinguish them, and carefully reserve Currants of superior quality for first-class liqueur, which sells as high as 66 cents per quart, wholesale. In general, indeed, wherever wine is good the Currant is also good. By this is not meant the choice growths but *vins ordinaires*, the vines producing which are frequently grown along with Currants."

The Currants are planted about 4 feet apart, and the after culture consists in hoeing the ground deeply in the spring, and two or three hoeing's during the summer to keep down the weeds. Pruning is done in the spring, at the same time with the Vines. As to soils, chalk or limestone, with a little clay in its composition, such as prevails in French wine districts, suits very well.

In regard to amount of fruit, and the price that can be obtained for it, Dr. Maillard estimates that every bush that has been planted five years, when the land is wholly occupied with the Currants, will yield 3½ lbs. of fruit. The yield on bushes growing singly among the grape vines is much greater. Estimating the average yield at only 2 1-5 lbs. to a bush, and 2,240 bushes on an acre, we have 4,928 lbs. as the produce per acre. The average price of the fruit in former years was, in 1841, 80 cents per cwt.; in 1842 and '43, $1; 1844 and '45, $2; 1856 and '57, $4; 1858 $7.50, and in 1859, from $5 to $7. It appears that some of the most important houses in Dijon have contracted with growers to take all their crops for 10 or 12 years to come at $3 per cwt. This would give $147 per acre as the price of the fruit. The trouble of growing Black Currants is very little, and they make a delicious and healthy wine, far superior to what is usually sold under the name of Port.

SCATTERED NOTES ON HORTICULTURE.

J. J. THOMAS, of the *Country Gentleman*, has recently visited some places in the West, and communicates to that journal some interesting "Scattered Notes of Travel," from which we make a few extracts. At Cleveland, Ohio, Mr. T. visited Dr. KIRTLAND, justly celebrated for the number of seedling cherries of great value that he has originated. Mr. THOMAS says:

"Dr. KIRTLAND informed us, in reply to a question as to the secret of his great success in originating new varities of the cherry, that he began in 1812, and for several years was quite unsuccessful. His knowledge of physiological botany however, led him to adopt the practice of crossing, and he had practiced the modes of both VAN MONS and KNIGHT before he had heard of either. After many years of experimenting, he found that the *Yellow Spanish* cherry (Bigarreau of Downing,) afforded the best results, and that the seed of this sort would grow freely, while other improved varities did not vegetate. He therefore adopted the *Yellow Spanish* for seed, and planted on one side of the selected tree, and in close proximity, a *Black Tartarian*, on another a rich *Mazzard*, on the third a *May Duke*, and on the fourth the early *Swedish*. The branches all intermingling, and bees being abundant in the neighborhood, nearly every seed was a cross. The young seedlings thus obtained, were carefully examined, and those only selected that exhibited by their large buds and leaves a promising appearance. Only about two per cent. were thus chosen. These selected trees, when of suitable size, were transplanted for bearing, and given freely to the neighbors on condition that they should allow them to fruit. The long line of trees which bordered the fields and roadsides in the neighborhood, indicated the extent of these experiments. Not more than one per cent. of all that bore, proved of sufficient value to recommend for cultivation; that is, only one in five thousand of the first seedlings."

Dr. KIRTLAND regards the *Cuyahoga* grape as the best of all the new American sorts, being superior to either *Diana* or *Delaware*—vigorous, very hardy, as early as the *Diana*, and as delicious as the best exotic kinds. Specimens were sent last year to the New York State Fair, and by an amusing but very natural mistake, pronounced by the fruit committee the best new *exotic* variety.

At Cleveland, as in this section, many pear trees have been injured or destroyed by the fire blight. The *Northern Spy* apple, after being nearly rejected for its non-productiveness, is bearing full crops this season, and promises to be as valuable at Cleveland as in the most favorable localities in Western New York. The *Porter* succeeds finely and the *Early Joe* is excellent.

Cleveland has long been famed for its fruits, and is situated in one of the best fruit regions in the United States, the protection afforded by Lake Erie often saving the crop when it is destroyed further south. The Heart varieties of cherries flourish there with eminent success, while as far south as Columbus they are usually attended with failure.

At Mt. Pleasant, Ohio, (ten miles from Wheeling, Va.,) Mr. T. made a short call at the residence of JAMES H. GILL, who occupies a fine farm of several hundred acres, and who also gives considerable attention to the culture of fruit.

"He finds the *Duchesse d'Angouleme* pear, (dwarf,) which has been reported as a failure some parts of the State, to grow and bear well, specimens sometimes weighing a pound and a quarter. The *Louise Bonne of Jersey*, as elsewhere, bears profusely. The *Catawba* grape, which until within a year or two has succeeded well, and always ripened its crop perfectly, now rots badly. He thinks a less luxuriant growth, with perhaps a dry bottom, would prevent it. His peach orchard, intended only for crops for home use, is kept well enriched in vigorous growth; and after using all he could in his family the present year, sent the remainder to Wheeling, where the crop brought readily two dollars per bushel, and occasionally five cents a piece, while the market was flooded with less excellent fruit at a dollar and half a dollar per bushel. Two hundred dollars were received from 113 trees, after supplying bountifully his family—an illustration on a small scale of the importance of thrifty growth and good sorts.

"The *Rambo* apple succeeds well at this place, in common with many other parts of the West, where the winters are not too severe. We examined a tree of this variety, forty years old, on the grounds of GEO. K. JENKINS, of Mt. Pleasant, the crop from which for the last eighteen years had averaged *ten barrels* annually. It was about 35 feet high, and eighteen inches in diameter. The soil was undoubtedly well suited to it, possessing depth and fertility."

Of the Columbus (Ohio,) nurseries of M. B. BATEMAN & Co., Mr. THOMAS speaks of as the first, if not the most extensive in the State:

"It is comparatively new, everything having been planted within five years, and now numbers one hundred acres actually planted with trees. The ornamental grounds, specimen orchards, &c., with which the home residence are surrounded, have made a fine progress in this short time. The Osage orange hedge, enclosing forty acres, also five years growth, we have never seen excelled. It is about seven feet high, strong and dense, about four feet thick at bottom, and tapering by straight sides to a sharp edge at top, and not, as too often seen, broad at top, which always makes a thin base sooner or later. We have seen many *Osage* hedges in this State, which were worth nothing, having been carelessly transplanted or with gaps, neglected in culture, and never properly cut back—which render success simply impossible. Apple trees are largely raised at this nursery, some three hundred thousand being propagated annually. Dwarf pears succeed well. The fire blight has not reached them this year, while so destructive in many other localities. The *Heart* cherries can be raised only as nursery trees for other regions—after two or three years of age, they fail."

At Cincinnati he found dwarf pear trees in excellent condition, and bending under loads of large and smooth specimens—some of them equal to any he had ever seen at Rochester or Boston. The *Duchesse d'Angouleme*, *Beurre Diel*, and *Vicar of Winkfield*, were very large and fair.

"The grounds of R. BUCHANAN possess great natural and much artificial beauty. The view on two opposite sides, over a broad and deep valley, in which could be discerned distant villages, richly cultivated fields, Spring Grove cemetry, and the grounds of the United States Agricultural Fair, is extensive and magnificent. He has added an artificial lake, and planted the slopes with ornamental trees, orchards and vineyards. The apple trees, of which there were many varieties were bearing heavy loads of fair fruit. The most profuse bearers were the *Willow Twig*, *Winesap*, *Yellow Bellflower*, *Rawles' Janet*, *Belmont*, and *Romanite*. He informed us that if he were confined to three varieties, he would select for early, medium, and late, the *Red Astrachan*, *Maiden's Blush*, and *White Pippin*. His *Catawba* vineyard is the best we saw in this region—the berries become more deeply colored in the neighborhood of Cincinnati than any which are ripened at the east, being often of as deep a purple as the half ripened *Isabellas* that are sometimes shown as fully matured. Pears, both dwarfs and standards, succeed well; but they will not bear the high culture and manuring which we give them in New York and New England. Standards do best when standing in grass, after attaining considerable size. Among others, a *Jaminette*, some fifteen years old, was bearing a most profuse crop. Dwarfs need moderate cultivation."

"LATONA SPRINGS, KY.—A pleasant carriage ride of five miles up the picturesque and beautiful valley of the Licking led to the residence of Dr. MOSHER, at Latona Springs. It is surrounded by a natural grove of three acres, containing, as he informed us, no less than sixty-three different species of forest trees. Dr. MOSHER has given much attention to proving the different varieties of the apple. Among those which succeed well are the

Winesap, Bullock's Pippin, Pryor's Red, eastern *Vandevere, Fameuse,* and others. The *Benoni* proves excellent, the tree, as elsewhere, being a very fine and symmetrical grower. The *Broadwell* and *Blenheim Pippin* are excellent sweet varieties. We saw a *Northern Spy* bearing a few fine specimens. The *Jonathan* appeared to be doing well—the *Esopus Spitzenburgh* exhibited its peculiar and rich flavor, but the apples were not of very fair appearance. Hubbardston *Nonsuch* appeared to be as good as in New York. The *Yellow Bellflower*, although good, is rather declining in character. The *White Bellflower*, or *Ortley*, very fair, and showing little of the scabby appearance so prevalent in other places, and especially at the east. The *White Pippin* proves one of the most valuable sorts.

"Dr. MOSHER's vineyard occupies about six acres, on the side of a high ridge of land, in a most picturesque position, facing the south. The vines are chiefly the *Catawba*, are planted in the quincunx form, four feet apart, and trained to single stakes about five feet high. The cultivation is effected by hand labor, and in spring the soil is loosened up by forking. An excellent contrivance is adopted to prevent the washing down of the soil on the steep hillside and the formation of gullies. Open ditches are cut at distances of about five rods, directly down the hill, and are walled at the sides, and paved on the bottom with flat stones set across the channel on edges. These ditches are placed at the lowest places, so that the surface water flows readily into them from each side, in slight channels between the horizontal rows of vines. Although large and rapid currents flow down the hillside through these drains, no injury whatever can be done.

The *Catawba* grape is becoming considerably affected by the rot, and other sorts are looked to to supply its place. Dr. MOSHER thinks the *Delaware* is going to prove one of the best substitutes. The *Venango* he thinks will be one of the best wine grapes, being entirely free from rot, hardy, and productive. It is of no value for the table, being essentially a brown Fox, but as late as the *Catawba*. The *Herbemont* ripens admirable here, and proves very delicious—about as good as the *Delaware*, and possessing all the characteristics of an exotic in quality."

Of the *Osage Orange* hedges in Ohio and Indiana, Mr. T. says:

"Many of them appear to have been carelessly planted, and remain uncultivated and uncut. They are consequently good for nothing. On the other hand, many others are well managed, in the manner we have occasionally recommended, and form dense and perfect barriers. Some are left too broad at the top, which tends to make them thin and open below. The best hedges were usually cut to a sharp ridge at top, and but little sheared on the sides near the bottom, causing the latter to grow thick inside."

GUANO FOR GRAPES.—In a prize essay on the cultivation of grapes in the Colony of Victoria, it is stated that guano had been used on grape vines with much benefit. "The first year of its application it had no visible effect on the stocks; the second it produced much wood and large berries, but no increased quantity of bunches; but in the third year it was astonishing to observe the great difference between 12 rows that had been manured with guano, and other 12 rows that had not been manured at all—the former looked healthy, dark green, had long strong branches loaded with large bunches of fruit, and far more advanced than others in their neighborhood."

FOR GROVE PLANTING.—A Wisconsin correspondent recommends sowing chestnuts for groves, or rails, in rows, 20 feet apart; the next best is Yellow Locust, plant same as Chestnut; fit the land as for corn, and plant the seed fresh.

SULPHUR FOR GRAPE MILDEW.—M. MERCIEUL, of France, states that he has found flowers of sulphur buried among the roots of grape vines to be a cure for mildew. He applied the sulphur on the 16th of August, two weeks after the mildew had attacked the vines, and it arrested the further spread of the mycelium, (fungus,) while other grapes adjoining, that were left without sulphur, were in a most pitiable condition, and he thought that "not a single grape would be saved." He thinks it would be better to put the sulphur in the soil during the winter, as he says "the sulphur would then be ready to act on the sap at the moment of its ascent in the spring." The plan is worth trying, but it seems to us somewhat doubtful whether the plants can take up the sulphur, as it is in an insoluble form.

FRUIT TREES IN MICHIGAN.

In travelling lately over portions of Kent, Ionia, and Montcalm Counties, I noticed in a good many thrifty growing apple orchards, that a considerable portion of the trees were dead and dying by a disease which seemed to be in the trunk. Before inspecting closely the trees, I judged from the amount of thrifty suckers thrown up from the roots, that it was the work of the borer, but finding none of the marks left by that insect, I was totally at fault as to the cause of such a general mortality, but I kept my eye on the orchards as I passed them, and when I had an opportunity went into them. I soon noticed that the disease was invariably upon the west side of the trunk, inclining a little to the south. The bark seemed first to crack perpendicularly, about midway of the body. This had let in the rain; that side of the bark and wood had died and turned black, and eventually the tree breaks and turns over to the east, leaving a bunch of suckers at the root. I also noticed, that those orchards which were sheltered from the west winds, by woods or hills, were not affected; and I eventually discovered that no tree that stood erect was unsound.

From these evidences, I drew my conclusions as to the cause, and the remedy. The soil in these parts is sandy or a light loam, and the roots do not readily get a firm hold; the trees have generally grown thriftily, and being pruned but little, have formed thick, bushy tops; the prevailing winds are from the west, as can readily be seen by a majority of the trees leaning to the east. In strong winds the small roots on the west side break. This is the cause of the suckers. These rob and weaken the tree, and in the next strong wind, and it may be when the trunk is frozen, the bark splits, the tree is soon over, so that the weight is beyond the center of gravity. Hence follows its destruction. Probably the plowing closer on the west side, after the tree is swayed, facilitates the process.

Being a new comer into this State, I do not know whether the trouble has long existed, or whether these has been but one season in which it has occurred, but I judge from the frequent thinness of the orchards, that the former is the fact.

The remedy that suggests itself to me is: first, to select, if you can, a sheltered location for orchards; second, cultivate the land deep, that the roots may reach far down; third, set your trees a little inclining to the west, with the heaviest branches upon that side; fourth, never set a tree, without setting a strong stake firmly on the west side, and fastening the tree to it, (this will keep the plough from coming too near,) taking care to examine and fix your stakes every season till the tree has formed a considerable top, when the danger is still greater than before, and your stakes hardly sufficient to hold it, then support it by a crotch set upon the east side, and catching against one of the main central branches: one which, should it be injured through carelessness, would not be so material. After the tree has borne a few seasons, and the limbs are somewhat bent down, I think it will take care of itself. Does any one say, this is too much trouble? Then, I say, he had better let his farm grow up with oak grubs, for without trouble he can not raise anything.

This portion of Michigan is, from its soil, but more particularly from its climate, adapted to fruit; there is no better fruit country in America. Its geography, and its thermal statistics, as well as the success of its culture show it to be so; and this, with the fact that there is between Lake Michigan and the Rocky Mountains, no more *good* fruit country in this latitude, affords the greatest inducements to its culture here.

A word or two more on shelter, and I have done for the present. In cleaning up a new farm in this oak country, it is wise to leave a strip on the west and north sides, of one to four rods in width, to grow up, and if the farm be more than 80 rods wide, a second strip would be advisable. Few persons are aware of the benefit of such shelter to crops and trees, as well as to themselves and their cattle; but if they will examine closely wherever such shelter exists, they cannot fail to be convinced.

MICHIGANIAN.

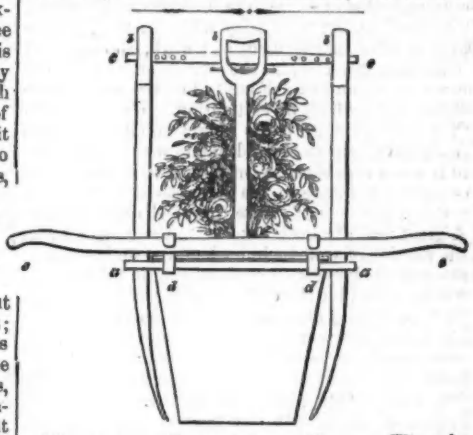
Muskegon, Mich., Sept., 1860.

GRAFTING GRAPE VINES.

Eds. Gen. Farmer:—In answer to Ben. Hadad's inquiries, I would say, that his want of success was attributable to various causes. In the first place, his *Isabellas* were headed down too low before grafting; in the second place, probably grafted "too late" in the season, and in the third place, (where in our opinion the difficulty principally laid) he says that he was careful to rub out the shoots, both above and below the graft, thus giving it no chance whatever of uniting, as it must have been "flooded with sap."

It is possible that Mr. Hadad's buds (of graft,) were not all right at the time of grafting.

I will give Mr. Hadad my experience in the difficulty. On the 11th of March, 1859, on commencing to start my Grape Vines in the early vinery, I thought that I would like to change a *Prince Albert* for something better, and made up my mind to graft it with the *Bowood Muscat*, which was done about 6 inches from the ground—the head of the old vine (or stock,) remaining untouched. As the graft commenced to grow, the head was gradually reduced on the old vine, and before the end of the summer my "graft" was a splendid rod, 14 feet long, having been stopped twice during that time, and measured about an inch and a quarter in diameter at just above the union. This year it has given some fine bunches of grapes, and next year it can be cropped as heavy as either of the old vines, which are above eight years old.—John Carlton, *Gardener to* Joseph Hall, *Rochester.*



Machine for Transplanting Trees.—The principle of McGlashan's apparatus for transplanting trees without disturbing their roots, will be understood from the annexed figure; *a* is a rectangular iron frame; *b*, *b*, *b*, spades to be forced nearly perpendicularly into the soil; *c*, *c*, an extension rod so applied as to force the spades outward by the leverage at *e* acting upon the fulcrum, *a*. The result is that the earth between the blades is pressed into a wedge. The whole is then lifted by the handles, *e*, *e*, attached by hooks, *d*, to the frame.

THE HORRORS OF HORTICULTURE.

I've got me a nice little garden,
With a neat little palin' around,
And I growl, without axin' your pardon,
For I grumble on very *good ground!*

Ne'er a crack for the eye of a cricket,
Your critical eye, sir, can view,
Yet the chickens pitch over the picket,
And the little Bob Rabbits pop through!

And oft when the sweat of your labor
Is sweetened with visions of fruits,
In comes the poor shoat of your neighbor,
And *up* comes your crop by the "roots."

In spite of your P's and your Q's, too,
You're T'd with the trouble you've lost,
P'eas, killed by the sticking they're used to,
And Q-cumbers curled by the frost.

Bad luck to your Irish potatoes,
Not an eye whence a tear ye might draw,
Not a Murphy to whisper come "ate us,"
Responds from the depths of the straw.

Your Melons are true melon-cholics,
Not rosy and cosy and flush,
Green gourds in the place of your "Waters,"
And Pumpkins in place of your "Mush."

I've got me a nice little garden,
A neat little palin' around,
I growl, and I do n't ax your pardon,
For grumbling upon my own ground.

—*Southern Cultivator.*

Ladies' Department.

AGRICULTURE AND WOMEN.

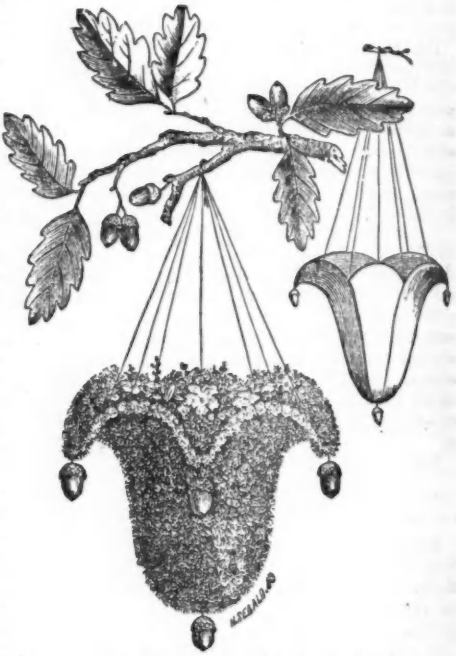
An American gentleman who lately visited England was struck with the interest manifested by ladies, including those of the highest rank, in agriculture. One of these, the Duchess of Portland, exhibited perfect familiarity with the minutest details of farm management and work, showing her American guest over the whole of the Duke's large estate, and explaining to him the various processes and methods of cultivation. We could wish that our American ladies would adopt one of the few aristocratic tastes and habits which sit gracefully upon republican women, and which would be of equal advantage to the interests of agriculture and to their own delicate physical organizations. A great deal of cant is uttered in these days about the mission of woman, but whenever we hear an attenuated, dyspeptic female talking in this wise, we feel sure that the daily handling of a broomstick, in a peaceable manner, or the charge of a kitchen garden, would soon put her upon the track most useful for herself and for society. When Rome was young and virtuous, the kitchen garden was always placed under the care of the mother of the family. In Sparta, the women, fit to be the mothers of heroes, cultivated the soil, whilst the men were fighting the battles of their country. Indeed, from the earliest period in the annals of our race, woman has aided by her counsels, and sometimes by her labors, in bringing agriculture to a state of perfection. The laws which Osiris gave to Egypt were not as valuable to that country as those precepts in agriculture, those instructions in embankments, irrigations and drainings, which Isis, his Queen, gave to the Egyptians, and which enabled them to derive so much benefit from the deposite of the Nile. Ceres, deified by the Greeks, made her people acquainted with the use of wheat, and the mode of cultivating it. To the Empress of China we are indebted for the mulberry tree and the rearing of silk worms. Woman of late years has demonstrated her capacity of shining in many spheres once considered the peculiar province of man. Miss Herschel has discovered comets; Mrs. Somerville laid open the mathematical structure of the universe; some have analyzed the chemical relations of nature in the laboratory, and others investigated the laws of social relations. With such a great amount and variety of power, may we not augur the most beneficial results to agriculture, if the women of our country, by their sympathy, encouragement and co-operation, by their studies and counsels, would prove themselves, as did the women of old, helpmeets to him whom God has ordained to cultivate the earth?—*Baltimore American.*

Plain Corn Starch Pudding.—Set upon the fire one quart of milk; take three table spoonsful of corn starch, and mix with a very little cold milk, with some sugar, and a little lemon juice. Pour it to the boiling milk, stirring briskly for two or three minutes. Pour it into a mould, and set to cool. Eat with milk or cream, and sugar.

To warm Potatoes.—Potatoes are nicely done in the following way: Par-boil as many potatoes as are needed; let them lie till the next morning, then cut them in small squares; add to them cream or milk, enough to make them more than moist, with a little butter, and pepper and salt. Place on the fire, cover them, and stir gently at times.

Sausages.—Sausages can be made by using mutton instead of pork. Chop lean and fat mutton together very fine, and season with sage, salt and pepper. Eat with mustard, and they can not be distinguished from the genuine pork sausages.

Onion Pickle.—In November, take well dried onions, of a good shape, small and round, peel them and throw into salt and water. Let them remain there a few days; drain them, put them in a jar and pour over them spiced vinegar.



ORNAMENT FOR DRIED FLOWERS.

The above drawings, made by an accomplished lady, represent a pasteboard hanging vase, covered with moss, and attached to an oak branch, for a parlor ornament. From the materials employed, it is better suited for dried flowers than those which require water.

The smaller basket represents the mode in which the pasteboard is united after being shaped, and the latter exhibits the same covered with moss. Every lady of the least taste can make these baskets, and ornament her boudoir, parlor, or sitting-room, with her own handiwork, which she will enjoy more than expensive purchased objects.

The oak-leaves may be represented in winter in leather.

New Advertisements this Month.

The Horse and his Diseases—John E. Potter, Philadelphia, Pa.
Arthur's Home Magazine—T. S. Arthur & Co., Philadelphia, Pa
Preserving Cider—Webb, Walker & Co., Utica, N. Y.
Fancy Fowls—C. N. Bement, Poughkeepsie, N. Y.
$2,000 a Year—Geo. B. Brigden, Norwich, Conn.
Honey—L. Chase, Westerly, R. I.
Farm for Sale—Henry M. Price, Scottsville, Albemarle Co., Va.
Farmers and Nurserydealers—C. B. Hart, Victor, N. Y.
Sheep for Sale—16 and 18 Chambers street, New York.
Rejected Patent Applications—J. Fraser, Rochester, N. Y.

The present number of the *Genesee Farmer* terminates our contract with our twenty thousand subscribers. But we stand ready and willing to renew it with one and all for another year. We must not part. Our connection, we trust, has been mutually pleasant and profitable. We have endeavored to furnish a useful and reliable paper, and we have not during the year received a single complaint, while we are constantly in the receipt of the most flattering and encouraging letters from all parts of the country. Under such circumstances we are led to believe that our old friends will not leave us, and that, with improved prospects for the farmer, we shall add many thousand new subscribers to our list.

We shall spare no efforts to improve the contents and appearance of the *Genesee Farmer* for next year. We contemplate making several improvements which will enable us to give more matter, and render the paper more attractive and useful. But when we state that the profits on a yearly subscription are *less than five cents*, it will be seen that it is not easy to add much to our expenses without loss. Indeed, if it was not for the large circulation of the *Genesee Farmer*, it could not be afforded at its present cheap rate.

We are dependent entirely on the voluntary assistance of our numerous friends to act as agents for the *Farmer*. We desire to return them our sincere thanks for their disinterested efforts on our behalf. We hope our readers will not wait to be *asked* to renew their subscriptions, but hand in their names at once, with the money, to the person getting up the club. If there is no one who is getting up a club in the town, let some one of our present readers do us the kindness to attend to it. It is not much trouble, and it shall be our endeavor to reciprocate the favor. We aim to compensate all who work for us. Our list of cash and specific premiums will be found on the last page.

The Rural Annual and Genesee Farmer in Clubs.—We send the *Genesee Farmer* and our beautiful 25 cent book—the *Rural Annual and Horticultural Directory* for 1861—in clubs of eight, for 50 cents the two! That is to say, we send eight copies of the *Farmer*, and eight copies of the *Rural Annual* for $4, and *present an extra copy of the* Rural Annual *to the getter-up of the Club.*

The Markets.—It is now estimated that the crops in England will be one-third below an average. During the month of October, the deliveries of foreign wheat in London were only 2,153,168 bushels, while for the same period last year they were 4,119,696 bushels. "No wonder, then," says the *Mark Lane Express*, "that every shipping port where plenty of foreign grain was in store has found a numerous attendance of buyers." The price of American wheat in London, Oct. 29, was $1.80@$2.01 per bushel. Red and white wheat are both quoted at the same price.

New York, Nov. 14.—Chicago spring wheat, $1.17@1.21; Milwaukee club, $1.24@1.26; white Michigan, $1.45@1.52; red Ohio, $1.32@1.35; white Ohio, $1.40@1.45; red Southern, $1.40@1.42; white do., $1.50@1.60. Barley, 68 to 85 cents. Rye, 69@71 cents. Oats, 34@38 cents. Corn, 70@83 cents. Peas, Canadian, 75@78 cents. White beans (Southern), 80@90 cents; white beans (Northern), 90@$1.20. Lard, 12@12¼ cents. Butter, 14@20. Cheese, 10¼@11.

Rochester, N. Y., Nov. 16.—White wheat, $1.30@1.40; red do., $1.08@1.16. Corn, 53@54 cents. Barley, 60@62 cents. Oats, 25@28. Rye 60@62½. Buckwheat, 38@40. Dressed hogs, 7 cents per lb. Beef, 3@5. Butter, 14@17.

Showbills.—We have already sent showbills to a few of our friends, whom we thought would be disposed to act as agents for the *Genesee Farmer*. We have more on hand, and shall be happy to send them by mail, prepaid, to all who will post them up, and use their influence to extend the circulation of the *Farmer*. Will those of our friends who are willing to act as agents for the *Farmer*, and who have not received our showbill, oblige us by writing for one at once?

Not New Subscribers alone.—Some of our friends think that in competing for our Cash Prizes only the *new names* will be counted in. This is not the case. We count in *all* that are sent and paid for, whether new or old, without any distinction whatever. The subscribers, too, need not all be at one Post Office. We send the papers to as many different Post Offices as there are members in the club, if desired.

Commence at once.—The great secret of getting subscribers is to *commence early*. As soon as this number is received—the last for the year 1860—will not *each one* of our friends who are disposed to act as agents for the *Genesee Farmer*, commence taking subscriptions *at once* for next year. The January number will be out by the 10th of December at the latest. Send on the orders immediately.

Cash Prizes, Cash Prizes, Cash Prizes.—It is surprising how few compete for our Cash Prizes. This is not right. We offer and pay them, and our friends should at least do us the favor to compete for them. Read over the list on the last page, and then see what you can do for us.

Our Club Rates.—We send five copies of the *Genesee Farmer* for $2, or 40 cents each; eight copies for $3, or 37½ cents each; and every additional number at the same rate. Those who send $2 for five copies, can have the three additional copies at any time to complete the club for $1. Do not wait, therefore, to complete the club—send in the names as fast as they are received.

"How many Subscribers will it take to get one of the Cash Prizes?"—We are frequently asked this question, and in reply would say, our January premiums in 1858 were taken as follows: A club of 29 took a premium of $5; 31, $6; 33, $7; 34, $8; 36, $9; 38, $10; 40, $11; 43, $12; 56, $13; 63, $14; 91, $15; 107, $20.

The January premiums for 1859 were taken by clubs of 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 49, 55, 60, 70, 74, 83, 97, 107, 116.

A club of 23 took one of the April cash premiums for 1859.

This year our January cash prizes were taken by clubs of 51, 52, 53, 54, 56, 59, 60, 62, 63, 65, 70, 73, 75, 78, 82, 90, 94, 118, 120, 157, and 166. Last year our highest cash prize was $25—we now offer $50.

Our April cash prizes, this year, were taken by clubs of 31, 33, 34, 35, 38, 43, 44, 46, 47, 48, 50, 51, 56, 57, 58, 60, 68, 71, 74, 104, and 124.

Our cash prizes for the half volume this year were taken by clubs of 18, 20, 22, 28, 31, 32, 34, 38, 49, 50, 56, and 71.

The names of the parties who take the prizes, with their address, are published. There is no deception about it. We *pay* the prizes in full, in *cash*, and feel certain that no young man who has a little leisure, and will take the trouble to speak to his neighbors and get them to subscribe, can fail of obtaining one of the largest of these cash prizes. We do not offer books, or machines, implements, seeds, pianos, &c., &c., but *cash*, that all may know exactly what they are working for. Our list of cash prizes for clubs sent in before the 15th of January next, will be found on the last page. We will send specimen copies and showbills free to all who are willing to form clubs.

The Rural Annual and Horticultural Directory for 1861.—The Sixth Annual volume of the *Rural Annual and Horticultural Directory* is now ready. To those not acquainted with the previous numbers, we would say, that the *Rural Annual* is a handsome book of 120 pages, published at the office of the *Genesee Farmer*, and designed to furnish a large amount of valuable and interesting information in a cheap and permanent form. A new number is prepared each year, containing entirely new matter. Among the contents of the present number may be named treatises on the Farmer's Kitchen Garden, Shade and Ornamental Trees, management of Window Plants, cultivation of Immortelles or Everlasting Flowers, Ornamental Hedges, Sulphur for Mildew on the Grape, designs for Farm Houses, Cottages, Suburban Residence, Barns, &c.; Ornamental Water Fountains, Construction of Gates, Calendar of Operations, Cultivation of Pears, with many other articles of interest and practical value to the Farmer, the Fruit Grower, and the Horticulturist.

It is illustrated with 80 beautiful wood engravings.

The *Rural Annual and Horticultural Directory* for 1861, will be sent, prepaid by mail, on the receipt of 25 cents in postage stamps. Address Joseph Harris, Publisher of the *Genesee Farmer*, Rochester, N. Y.

Arthur's Home Magazine.—The prospectus of this well-known and excellent Magazine, for 1861, will be found in our advertising columns. Those not acquainted with the work should write for a specimen copy—which the publishers offer to send *free* to all who wish to subscribe.

Agricultural Lectures at Yale College.—The Second Agricultural Lecture Course, under the auspices of Yale College, will be held at New Haven, Ct., next February. It will be held in the lecture room of the magnificent new building of the Philosophical Department, and will occupy the whole month. Among the lecturers are Professors J. A. Porter, S. W. Johnson, H. Silliman, and W. H. Brewer; Drs. Fitch, Comstock, Grant and Gulliver; Messrs. M. P. Wilder, P. Barry, R. G. Parder, L. F. Allen, H. F. French, J. S. Gould, Levi Bartlett, L. H. Tucker, C. M. Clay, C. L. Flint, Sanford Howard, M. C. Weld, D. G. Mitchell, Ambrose Stevens, and Joseph Harris. The lectures will be fully illustrated with diagrams, models, life-size portraits of animals, &c.

Just as we go to press, a telegram from Prof. Porter announces the addition to the above list of lecturers of five new names of gentlemen eminent in their respective departments; also, that the subject of Horse Breaking and Training will be illustrated by living animals. Full particulars can be obtained by addressing Prof. John A. Porter, New Haven, Conn.

Notes from Maine.

The Weather.—The month of October has been more pleasant than September, giving us many warm and beautiful days for the husbandman to finish his harvesting and prepare for winter, which with us, may almost be said, to continue for six months. The frosts in September were more injurious than was at first supposed; much fruit and vegetables were frozen, and frost-bitten so badly as to cause early decay in many orchards situated in sheltered positions, and on low grounds, near water, the fruit was so much injured as to be suitable for nothing but cider. October has been a warm month—the mean being 45.9°; extremes, 63° and 29°. One of the heaviest thunder storms for the year occurred on the 26th, at 4 and 5 P. M., and a heavy shock of an earthquake was felt on the 17th, at 6 A. M. At 2 P. M., of 30th, the thermometer indicated 65°. November began unusually warm, at 2 P. M., of 1st the mercury marked 69°.

Hungarian Grass.—An experiment with this grass, upon a small scale this season, resulted as follows:—Nearly a quart of seed—the products of two heads in 1859—was sown the 22nd of May, upon a piece of ground, containing eight square rods, or one-twentieth of an acre, and harvested the 18th September, producing 300 lbs. of fodder or hay, from which was threshed 60 quarts of seed, weighing 45 lbs. per bushel, or at the rate of three tons of hay per acre, or about 40 bushels of seed, and two tons of fodder per acre. The ground upon which it was sown was in potatoes the previous year, and the manure applied this year consisted of but one bushel of plaster or gypsum. Of its merits or demerits I have nothing at present to say; I merely give the facts in the case, leaving each one to draw his conclusions.

Preparing for Winter.—The present warm weather affords a good opportunity to put everything in order for the coming cold winter. Tender shrubs and plants should be carefully attended to, and among the different articles used for this purpose, that which finds the most favor with us, are spruce and fir boughs—hundreds of loads are annually sold in this city for boughing gardens and around houses; and further back, where evergreens abound, shrubs from six to twelve feet in height are cut and disposed around the buildings, and in the gardens and yards; besides the shelter they give, a little taste in their disposal will cause a pleasing effect, destined in some degree to cheat winter of its dreariness.

Stock.—Stock still continues at a low figure consequent upon the high price of hay, which is now selling (loose) in this market at $16 per ton. Good cows are being sold from $10 to $17 apiece, and all young stock still lower; working oxen command a fair price; beef brings from $3 to $5 per hundred. It is a question whether farmers will profit more by sacrificing their stock, so as to dispose of hay, or keep it until spring, when it will undoubtedly command a high price, beside having their manure.—Geo. E. Brackett, *Belfast, Me., Nov.* 1860.

Inquiries and Answers.

WHAT AMOUNT OF FOOD IS REQUIRED BY A HARD WORKING MAN?—(M. D.) This depends on the quality of the food, the nature of the climate, and on such a variety of circumstances that it is impossible to give a satisfactory answer. The average allowance to British sailors in active service, is 302 ounces of *solid food* per week, and a pint and a half of rum. Dr. PERCY mentions the diet of a prize fighter during a course of rigorous training. He eat 1 lb. of mutton at each meal, three times a day; at dinner he eat in addition 2 ounces of bread, and at each meal drank half a pint of ale. He walked regularly 17 miles per day. The total *solid food* contained in this diet is 350 ounces weekly. We suppose about 3 lbs. of solid food per day in temperate climates may be taken as the average consumed by hard-working men. But in the Arctic and Antartic regions, the amount of food that can be disposed off is truly immense. Thus Ross tells us, that the Esquimaux eat 10 lbs. of meat at a meal, accompanied by the same quantity of oil. PARRY weighed the food of an Esquimaux lad, scarcely full grown, and found that he consumed, during the day—sea-horse flesh, 8½ lbs.; bread, 1½ lbs.; rich gravy soup, 1½ pint; raw spirits, 3 glasses; strong grog, 1 tumbler; water, 1 gallon 1 pint. COCHRANE describes a Yakut or Tongouse as eating 40 lbs. of flesh in a day, saying that a good calf, weighing 200 lbs., "may serve four or five good Yakuts for a single meal;" and that he has seen three of them "consume a reindeer at one meal." Admiral SARITCHEFF knew a Yakut who consumed "the hind quarters of a large ox, 20 lbs. of fat, and a proportionate quantity of melted butter for his drink," in a day. The Admiral tried an experiment with him, by given him "a thick porridge of rice, boiled down with 3 lbs. of butter, weighing together 28 lbs.; and, although the glutton had already breakfasted, yet did he sit down to it with great eagerness, and consumed the whole without stirring from the spot; and, except that his stomach betrayed more than an ordinary fulness, he showed no signs of inconvenience or injury." BARROW states, that three Hottentots eat one sheep in a day, and that ten of them eat an ox all but the hind legs in three days. The Samoyedes are stated to consume 8 or 10 lbs. of meat at a meal, flavored with a dozen tallow candles, and washed down with a quart or two of train oil. Extravagant as these statements appear to be, most of them have been verified by numerous observations.

"ARE DURHAM COWS GOOD MILKERS?"—(J. M., *Elgin Co., C. W.*) There are some strains of Durhams, or, as they are more generally called, Shorthorns, that are good milkers, but as a general rule, the Shorthorns have a greater tendency to produce fat than milk. Mr. HARLEY, author of the "*Harlein Dairy System*," published in 1829, tried the Shorthorns, but found them far less profitable than the Ayrshires. They gave as much milk as the Ayrshires, but consumed considerably more food.

BEES.—Last week I took a bee-tree, hauled a piece of it home and set it up, and they appear to be doing well. How long will they live or work if the queen is killed, or how can I tell if they are all right? Can you tell me where I can get a good work on bee-keeping, and the price?—J. B. D., *Marion, Pa.*

We can send you "Langstroff on the Bee." Price $1,25.

GRAIN AMONG FRUIT TREES.—I observe that in your "Rural Annual and Horticultural Directory," you say "To sow oats, wheat or barley, in a young orchard is the height of folly." No reason is given for this proposition. Doubtless the subject is discussed in dissertations on the orchard, which I have not seen—not having given the subject much attention heretofore. Might I therefore ask you to explain the reason why these crops are hurtful to a young orchard? Does the prohibition also exclude rye? I had intended sowing a crop of rye on a piece of ground as a preparation to plant fruit trees this fall and winter. I intended to plant the trees after the rye was sown, and let both grow together.

My past experience satisfies me that young orchard trees do but little good unless cultivated in some way, and I had accordingly made up my mind to sow oats every spring in my orchard, and hoe immediately around the roots of the trees, and feed the crops to my hogs on the ground. But the opinion expressed in your "Rural Annual" discourages this idea.—J. F. D.

Will some of our correspondents give us an article on the above subject? We have not space this month to do it justice. Oats, wheat, barley or rye, draw much plant-food and moisture from the soil and check the growth of the trees. *Hoed* crops are less injurious, as the soil can be kept well stirred, and will not be so dry as when the plants cover the whole ground. Hoeing the ground round the trees, as proposed, will answer the purpose, *provided it is hoed for a sufficient space round the young trees*—say six or eight feet in diameter. This will answer for a year or two, but as the trees grow the roots will extend much farther, and in the case of peaches and dwarf pears, especially, it is best to let them occupy the whole ground.

QUINCES ON THORNS.—I have heard that the quince does well when grafted on the common white thorn. Can you or your correspondents give us some information on the subject?—W. A., *Conn.*

We have had no experience on this point, and should be glad to hear from those who have. Some years since, W. BACON, of Richmond, Mass., gave an account in the *Horticulturist*, of some quinces grafted on the thorn, which succeeded admirably.

LIME FOR FRUIT TREES.—In the October number of the *Genesee Farmer*, a correspondent recommends lime as the best manure for fruit trees. Now, I wish to know why lime is the best manure for an orchard? and if best, how, when, and in what quantities should it be applied to a given extent of land? Can land be made too rich with stable or barn yard manure for any varieties of plum or pear, so as to prevent them bearing fruit?—J.K., *Vaughan, C. W.*

PLANTING PEAS IN THE FALL.—In reply to your inquiry in the last number of the *Genesee Farmer*, in regard to planting peas in the fall, I would state that I have practiced this for twenty years past, and had my peas in market from the 5th to the 10th of June. I plant in November, and from that untill March, as the frost will permit Last year I planted the 16th of February, and marketed them the 6th of June. I have not planted yet as the weather is very warm.—Z. KNAPP, *Pittston, Luzerne Co., Pa.*

MUCK.—Will some of your correspondents tell me the easiest and best way to put on muck? I have a level field (but not wet), which I planted with corn last spring, and find it has too much lime on it. It is clay ground. I would like to draw the muck out of a mill-pond and spread it on this fall without lime, and harrow it well. That is the easiest way for me. Or, would it be best to mix lime with it this fall, and let it lie until next spring before it is put on; or is it useless to put such stuff on the land? It is a kind of black mud, leaves, small twigs, etc., settled in the backwater, and is dry at low water. Any information will be thankfully received from an experienced applyer of muck.—A. B. W., *New Village, N. J.*

Read What is Said of the Genesee Farmer.

I AM extremely pleased with the *Farmer*.—R. C. A., *Renfrew, C. W.*

THE *Genesee Farmer* still keeps up its high reputation.—*Civilian, Independence, Iowa.*

THE *Genesee Farmer* is decidedly the cheapest journal we know of.—*Excelsior, Hightstown, N. J.*

THE *Genesee Farmer* is an excellent Monthly, filled with sound science and honest doctrine.—*Homestead.*

I HAVE read the *Farmer* so long, I do not like to do without its friendly visits.—D. S., *McGillivray, C. W.*

IT is a work which should find its way in'o every farmhouse in the country.—*Democrat, Lansingburgh, N. Y.*

THE *Genesee Farmer* is one of the best and most useful agricultural journals in this country.—*Saratoga Farmer.*

THE *Genesee Farmer* is an excellent work. The Farm, Dairy, Orchard, Garden, &c., are amply treated,—*Standard, Durham, C. W.*

THOSE wishing a reliable Agricultural paper cannot do better than to subscribe for the *Genesee Farmer*.—*Journal, Wabashaw, Minn.*

The *Genesee Farmer* is acknowledged by everybody to be the most valuable monthly of its class in the country. *N. H. Journal of Agriculture, Nov.* 14, 1861.

WE consider the *Genesee Farmer* the cheapest publication of its character to be found in the country, and heartily recommend it to our readers.—*Star, Wrightsville, Pa.*

THERE are many useful and practical lessons in the *Farmer*, which will, upon perusal, recommend it. I do not like to lend my own, as I wish to keep all for reference.—H. B. N., *Westport, N. Y.*

MR. H., I would express my satisfaction with the *Farmer*. While it seems to be friendly to novelties, it also preserves, I think, a fair conservative character in horticultural matters.—A. B., *Neida, N. Y.*

WE know of no Agricultural Journal that has been so long and favorably known as the *Genesee Farmer*. Its information on agricultural matter is always reliable, and no farmer can take it without being benefitted.—*Herald, Carlisle, Pa.*

THE interesting *Genesee Farmer* comes freighted with a full variety of able and valuable articles, which will be treasured by our agricultural readers. Its contributors bestow much attention upon their subjects. This monthly periodical, always good, has improved still further lately.—*Pennsylvanian, York, Pa.*

THOSE who do not yet take the *Genesee Farmer*, should borrow one from their neighbors who do, and afterwards, we feel certain, they will make up their minds to procure it for themselves. The suggestions in one number will often save the farmer fifty times the price of the work for a whole year.—*Chronicle, Ingersoll, C. W.*

IT is almost impossible, without enumerating its contents, to give those who have not the privilege of reading this agricultural paper, an idea of the vast amount of information on rural subjects to be found in its columns. There are articles upon every department of agriculture, gardening, &c., by competent writers.—*Tribune, Cayuga, C. W.*

WE never fail to find in its columns every branch of Agriculture, introduced and treated in the most intelligent and interesting manner,—and while we are interested in its details, we are no less so, in the judiciousness of the subjects this incomparable Monthly brings to our notice. Every farmer ought to subscribe for it.—*Gazette, Prattsburgh, Md.*

THIS ably-conducted Agricultural Journal always comes to us brimful of practical information on all subjects of interest to the farmer and fruit-grower. One of the oldest, it is also one of the most useful and reliable of its class. The price of it is so low, (only fifty cents a year,) that those taking other journals of the same character can afford this also. No farmer, anywhere, should be without it. Try it for a year, and you will never regret the trial.—*Puget Sound Herald, Steilacoom, Washington Territory.*

Books, Pamphlets &c., Received

CHAMBERS' ENCYCLOPEDIA: A Dictionary of Universal Knowledge for the People, on the basis of the latest edition of the German Conversations Lexicon. Illustrated by Wood Engravings and Maps. Part 21. New York: D. APPLETON & Co. Price 15 cents per number.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS for 1862. With one hundred and forty engravings. Albany: LUTHER TUCKER & SON. Price 25 cents.

WESTMINSTER REVIEW. American edition. Vol. 51, No. 2—for October. New York: L. SCOTT & Co. Price $3.

EDINBURGH REVIEW. American Edition. October. New York: LEONARD, SCOTT & Co. Price $3 a year.

The following books are for sale by STEELE, AVERY, & Co., of this city.

A COURSE OF SIX LECTURES, on the Various Forces of Matter, and their Relations to each other. By MICHAEL FARADAY, D. C. L., F. R. S.: Edited by WILLIAM CROOKES, F. C. S. With numerous illustrations. New York: HARPER & Bros. Price 75 cents.

LIFE AND CORRESPONDENCE OF JOHN A. QUITMAN, Major-General U. S. A., and Governor of the State of Mississippi. By J. F. H. CLAIRBONE. In two volumes. New York: HARPER & Bros. Price $3.50.

SOCIAL WELFARE AND HUMAN PROGRESS. Being Academic and Occasional Discourses and other Pieces by C. S. HENRY, D. D. New York: D. APPLETON & Co. Price $1.

MY NOVEL; or, Varieties in English Life. By PISISTRATUS CAXTON. Library Edition in two volumes. New York: HARPER & Bros. Price $2.50.

EVAN HARRINGTON; or, He Would be a Gentleman. By GEO. MEREDITH. New York: HARPER & Bros. Price $1.

EDUCATION: Intellectual, Moral, and Physical. By HERBERT SPENCER. New York: HARPER & Bros. Price $1.

WHEAT AND TARES. New York: HARPER & Bros. Price 75 cents.

All the above books can be obtained from the respective publishers, sent, prepaid by mail, for the price annexed.

ADVERTISEMENTS.

A FEW short advertisements of interest to farmers—and only such—will be inserted in the *Genesee Farmer* for twenty-five cents a line, or $2.50 per square, each insertion, payable in advance. To secure insertion, they should be sent in by the 15th of the previous month. The *Farmer* has large lists of subscribers in *every State and Territory, and in all the British Provinces.* (It has nearly 5000 subscribers in Canada West alone.) There is no better or cheaper medium for advertising everything of general interest to rural residents in all parts of the United States and Canada.

We will also insert a few "Special Notices," if appropriate to our columns, at fifty cents a line.

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SPECIFIC PREMIUMS.

1. To every person who sends us EIGHT Subscribers, (at our *lowest terms of thirty-seven and a half cents each*,) we will send, postage paid, a copy of our beautiful twenty-five cent book, the *Rural Annual* for 1861.

2. To every person who sends us SIXTEEN subscribers, (at our lowest club terms of *thirty-seven and a half cents each*,) we will send one extra copy of the *Genesee Farmer*, and one copy of the *Rural Annual*, prepaid, by mail.

3. To every person sending us TWENTY-FOUR subscribers, (as above) we will send two extra copies of the *Farmer*, or two copies of the *Rural Annual* and one extra copy of the *Farmer*.

Those who send more than twenty-four will probably take one of the Cash Prizes. If not, Specific Premiums will be sent in the same ratio as the above.

A TWENTY-FIVE CENT PREMIUM TO EACH SUBSCRIBER!

Rural Annual and Genesee Farmer in Clubs.

AS A STILL GREATER INDUCEMENT

TO FORM CLUBS,

We offer the GENESEE FARMER for one year, and our beautiful twenty-five cent book, the RURAL ANNUAL AND HORTICULTURAL DIRECTORY for 1861, in clubs of eight or upwards, at Fifty Cents the two. In other words, for FOUR DOLLARS we will send *eight copies* of the FARMER for one year and eight copies of the RURAL ANNUAL, together with a RURAL ANNUAL for the person who gets up the Club. For EIGHT DOLLARS we will send *sixteen copies* of the FARMER and *sixteen copies* of the RURAL ANNUAL.

Any person sending us THREE DOLLARS for a club of eight of the GENESEE FARMER, shall receive one copy of the RURAL ANNUAL for his trouble.

We send the club to one address, or write the name of each subscriber on his paper, as requested.

Clubs are not required to be at one post-office, or sent to one address. We send the papers wherever the members of the club desire. It is not necessary that the club should be sent in all at one time. Names can be added at any time, and all that are sent in before the fifteenth of January will be counted in. Send on the names with the money as fast as they are obtained.

☞ Money may be mailed *at our risk, and you need not "register" the letters.*

Address JOSEPH HARRIS,
PUBLISHER AND PROPRIETOR OF THE GENESEE FARMER,
September 1, 1860. ROCHESTER, N. Y.

STEREOTYPED BY JAMES LENNOX, ROCHESTER, N. Y.

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